REPORT of the ROYAL COMMISSION ON PRICE SPREADS OF FOOD PRODUCTS

VOLUME II

SEPTEMBER 1959

Mrs. W.R. Walton Jr.

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Volume II

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TO HIS EXCELLENCY

THE GOVERNOR GENERAL IN COUNCIL

MAY IT PLEASE YOUR EXCELLENCY,

We, the Commissioners, appointed as a Royal Commission in accordance with the terms of Order in Council P. C. 1957-1632, to examine and to make recommendations upon certain matters relating to the price spreads of food products of farm and fisheries origin in Canada:

BEG TO SUBMIT TO YOUR EXCELLENCY

THE FOLLOWING REPORT.

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AGRICULTURE

PART I

THE GENERAL PROBLEM AND ITS SETTING

1. Representations by Primary Producers and Consumers

During the public hearings, representatives of farm organizations repeatedly referred to the index of prices received by farmers (the Index of Farm Prices of Agricultural Products) prepared and published by the Dominion Bureau of Statistics.[1] This index is well publicized in the farm papers, and farmers, or at least their representatives, follow its changes with close attention. Similarly during the hearings, references were made on behalf of consumers by the Canadian Association of Consumers, the National Council of Women of Canada, labour groups and farm groups[2] to rising prices as reflected in the food component of the Consumer Price Index computed by the Dominion Bureau of Statistics. Newspapers and other media regularly report on this index and its components. Many consumers are familiar with it, and watch with interest the changes which occur.

As the hearings progressed, it seemed to the Commission that the general problem as presented could be illustrated by a chart showing the movements of the food component of the Consumer Price Index and the Index of Farm Prices of Agricultural Products. The chart, reproduced in this report as Chart 1, was prepared and copies were distributed to food processors and distributors at the time the firms were invited to make submissions to the Commission. A large reproduction of the chart was displayed during the public hearings in the central provinces.

Both indexes, as presented in Chart 1, are based on the year 1949, the official Index of Farm Prices of Agricultural Products being recalculated to put it on the 1949 base. This year was one in which prices and the relation between prices changed relatively slightly. It was selected by the Dominion Bureau of Statistics as the base year for many indexes of prices during the postwar period.

Chart 1 shows that in 1950 and 1951 food prices paid by consumers and prices received by farmers both moved up rapidly and in about the same proportion. In the second half of 1951, farm prices turned down sharply, to be followed somewhat later by a fall of lesser proportions in retail food prices. Both indexes continued to decline to 1953. After 1953, the index of retail food prices remained stable until 1956 when it began to rise; the decline in the index of farm prices continued to 1957. Farm prices turned upward in the latter part of 1957.

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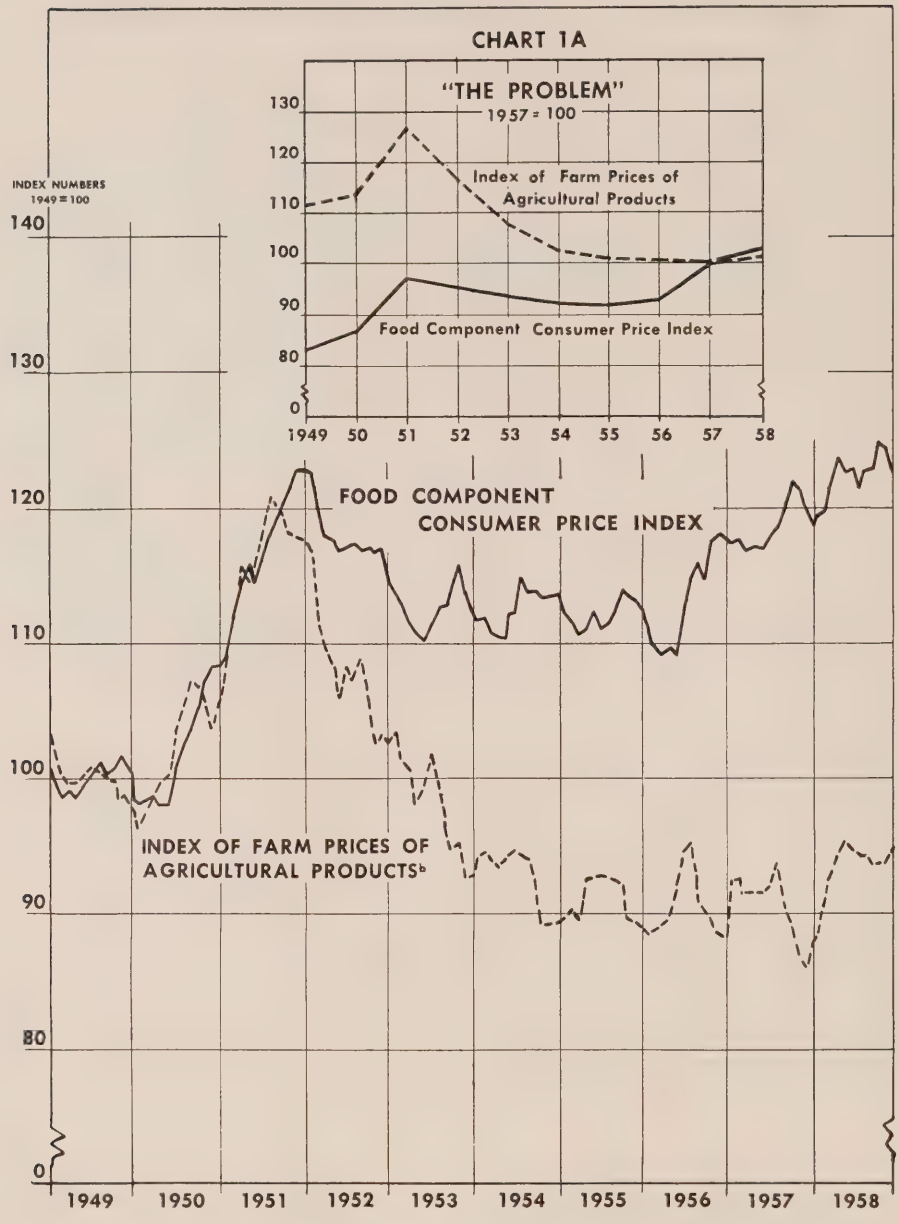
1 For example, see the briefs presented by the Canadian Federation of Agriculture (*Proceedings*, p. 4716), the Interprovincial Farm Union Council (p. 3920), the Saskatchewan Farmers Union (p. 1393), the Alberta Wheat Pool (p. 606) and the Ontario Federation of Agriculture (p. 2497).

2 For example, see the briefs presented by the Canadian Association of Consumers (*Proceedings*, p. 4336), the Ontario Federation of Labour (p. 2712) and the Canadian Federation of Agriculture (p. 4703).

CHART 1

"THE PROBLEM"[a]
1949=100



a—The copies of this chart which were distributed showed information up to mid-1958 only.

b—Base shifted from 1935-39 by recalculation.

Some Comments on the Use and Interpretation of Index Numbers

At this point, two comments on the interpretation of Chart 1 should be made. In the first place, the difference between the indexes at any time does not measure the spread between farm and retail food prices, although the tendency for the indexes to diverge since 1951 is an indication of a widening of the spread after that year. Index numbers measure changes in prices; they cannot reflect the actual difference between prices. The fact that the two indexes are at the same point in 1949 does not mean that there was no spread in that year. There certainly was. We can, however, see from the chart that retail prices have increased more rapidly than farm prices. Consequently the spread has increased since 1949. In the second place, the selection of 1949 as the base year does not necessarily mean that the relation between farm and retail food prices or the spread in this year was "fair and reasonable". No such judgment is made either by the statisticians who selected 1949 as a postwar base, or by the Commission in using Chart 1. The concept of a relationship between farm and retail food prices which is "fair and reasonable" is dealt with elsewhere in our report,[1] because the terms of reference require the Commission to comment on whether price spreads are "excessive". Chart 1 does not enable us to come to any conclusion on this point. The importance of these comments on the interpretation of Chart 1 can be seen by glancing at Chart 1A (on the same page as Chart 1) which represents the same price information expressed as indexes using the year 1957 as equal to 100.

In view of references made to price indexes in evidence received by the Commission, it seems necessary for us to make one or two other comments on the use and interpretation of index numbers.

We refer first to the quantity weights used in the calculation of price indexes. The index of prices received by farmers measures changes in the total market value of a fixed "carload" of farm products, the amount of each product being the same as the quantity sold off farms in the base period. These amounts represent the quantity weights. The base period for the Index of Farm Prices of Agricultural Products (Chart 1) is the average of the five years, 1935-39. The output, and quantity sold off farms, of particular farm products varies considerably from year to year as a result of weather and other factors. The average of five years, rather than the quantities in any one year, is used in this index in order to eliminate the effects of year-to-year variations around a more normal volume of production and sales.

The quantity weights which are arrived at for the five years, 1935-39, are applied to all subsequent years for which the price index is calculated. This is the commonly used procedure in the calculation of indexes designed to measure changes in prices alone. However, it may lead to some misinterpretation of the meaning of changes in the index, particularly in relation to farm incomes. A change in the Index of Farm Prices of Agricultural Products does not tell in what way gross farm income has changed. For example, over any period farmers may have been going out of production of a product, and therefore at the end of the period the price of this product has little effect on the actual income received by farmers. The statistician from time to time adjusts the quantity weights to a more recent base. But there is a more substantial difficulty in attempting to draw inferences about farm incomes from an index of prices. The index of prices takes no account of the

[1] See Vol. I, Chapter 3.

intricate relations between price and quantity sold, the two elements determining total farm revenues. The index may reflect a decline of 20% in prices, but the quantities produced and sold may have increased by 30%. In this event, although there has been a decline in prices received, gross farm income has increased.

The index of retail food prices measures the changes in the total value of a fixed "basket" of items expressed in physical units, the quantities of the particular commodities being arrived at from studies of family food expenditures made in 1947-48. The use of fixed quantity weights leads to similar problems of interpretation to those we have noted in relation to the index of farm prices. The retail food price index does not take account of changes which have occurred in the proportions in which consumers buy particular commodities. But there is another problem in the calculation and use of indexes of prices paid by consumers. As we will have occasion to emphasize in our analysis of the spread, what the consumer pays for when she purchases food, or any particular food product, is the raw material as it leaves the farm, plus a lot of services which become associated with the farm ingredient as it progresses along the marketing system. Some of these services are related to changes in the physical form in which the final product appears, but many of them are intangible. To put it another way, the consumer when she purchases a unit of a commodity pays for a package of satisfaction derived both from the services performed by the farmer in producing the original farm product and from the services of those engaged in marketing. The price paid is expressed in terms of a physical unit which may be similar to or different from a unit of the original material, and covers all services whether or not these have tangible expression in the form of the final product.

The appreciation of this view of the elements which are covered by the food expenditures of consumers, as will be clear from our later analysis of price spreads, has wider implications than we are urging at this point. But it has relevance to the use and interpretation of indexes of retail prices in two distinct ways.

First, the total "package" which the consumer pays for includes effects of services which are evident in the commodity. Statisticians who are engaged in preparing price indexes can observe changes of this kind and can make allowances for them. For example, tea in bags seems to represent a "package" which is preferred to the "package" represented by tea bought loose. As consumer buying habits change the statistician can shift from pricing loose tea to pricing tea bags: the index does not rise as a result of the shift to higher priced tea bags. This is the correct adjustment if the index is concerned with changes in the prices of the same "commodity"—tea in this case. If we think of tea as the only food, or as representing all food, the index does not show an increase in food prices, but the consumer is evidently getting more satisfaction from her food dollar. The practical problem of the statistician is rendered more difficult than our illustration suggests because many changes are more difficult to observe and make allowance for than the change to tea bags and, in a period of rapid changes, it may be impossible to keep up with them.

The total "package" which the consumer pays for also includes satisfaction derived from services which have no evident effect on the physical commodity. These the statistician cannot see, and therefore he is unable to make allowances for them. For example, it seems evident that consumers prefer the complex of con-

ditions associated with the supermarkets to those associated with the corner grocery store. It may be impossible to measure and compare the elements in the particular combination of conditions in each case, but the preference of the consumer is evident in the transfer of her patronage from the corner grocery to the food supermarket. The cost of providing the conditions must enter into the prices charged for the commodities sold, including those commodities which enter into the calculation of the food retail price index. In this case the commodity is not the same over time—the tea has other things associated with it. If then the consumer pays a higher price this does not mean that she is getting less satisfaction from her food dollar.

The problems we have referred to are not unfamiliar to the statistician.[1] He strives for an index which is the most appropriate for any particular purpose; his problem is rendered more difficult if the index has to be used for a variety of purposes.

Revision of Price Indexes for Purposes of the Commission

We have thought it proper to illustrate the general problem with which the Commission is concerned in terms of the two price indexes in Chart 1. The problem of the consumer (rising food prices) and the problem of the primary producer (falling farm prices) were presented to us by reference to these two indexes. However, both indexes required some modification to adapt them to the particular purposes of the Commission.

The Commission concluded that it was concerned with the spread between the prices of commodities *produced on Canadian farms and consumed in Canada.* The basket of commodities used to determine the food component of the Consumer Price Index includes imported items such as tea, spices, and citrus fruits. The carload of products used in determining the Index of Farm Prices of Agricultural Products is based upon quantities sold off farms in Canada and in some cases, for example, wheat, a large part of the output is not consumed in Canada. It also includes a number of non-food products such as tobacco and wool.

The Commission made adjustments in both indexes so as to make them more appropriate to its purposes. The food component of the Consumer Price Index was adjusted to give weight only to the quantities of foods produced on Canadian farms and consumed in Canada. The Index of Farm Prices of Agricultural Products was recalculated using quantities for 1949, and only the amounts of food products actually used within Canada in that year. The adjusted indexes are shown in

[1] We have indicated earlier that the total "package" which the consumer pays for includes effects of services which are evident in the commodity as well as services which are available to the buyer but which are not associated with the individual commodity. Thus, the increase in the calculated food price index during the past 10 years would tend to overstate the increase in prices as such because it is impossible to take account of all increases in services. We do not wish to suggest, however, that all changes represent increases in services. Indeed, during the war years the changes that took place probably represented on balance a decrease in services, with the price index as a result understating the increase in prices because of a reduction in the quality and variety of items and services associated with them. This qualification on the interpretation of price increases is often overlooked. The Commission has noted several current references to this problem: "Quality Changes and Index Numbers" in the *Proceedings of the Business and Economic Statistics Section, American Statistical Association,* December 27-30, 1958, and the bi-monthly *Business in Brief* of the Chase Manhattan Bank, No. 25, March-April, 1959. It was also touched on in the submission of the Retail Merchants' Association of Canada, *Proceedings,* p. 4409.

Table 1 and Chart 2. Although the tendency for the two indexes to diverge in the early '50's is evident in both charts, some differences between Charts 1 and 2 are apparent. The divergence occurs at a later point of time in Chart 2, and is not as great as in Chart 1.

Both these differences are due mainly to the lesser weighting of wheat (and other grains) in the Index of Prices Paid to Farmers for Food Products for Domestic Consumption (Chart 2). Wheat prices (and prices of other grains) fell earlier and further than prices of other farm products. Prices of imported foods, particularly coffee, rose sharply in 1954, and in subsequent years the index of prices of imported foods remained consistently above the index of retail prices of foods of a class or kind grown in Canada. However, the exclusion of imported foods from the Index of Retail Prices (Domestic Foods) in Chart 2 had only a slight effect.

Table 1—Index Numbers of Retail Prices of Foods of Domestic Origin and Farm Prices of Canadian Food Products for Domestic Consumption, 1949 to 1958

(1949 = 100)

Year	Retail[a] Prices	Farm[b] Prices
1949	100.0	100.0
1950	101.4	100.4
1951	116.9	118.4
1952	116.4	113.7
1953	112.0	101.4
1954	110.4	97.4
1955	110.3	96.0
1956	111.1	96.6
1957	116.8	97.5
1958	120.2	99.9

[a] D.B.S. unpublished data.
[b] Compiled by the Commission using fixed quantity weights based on domestic consumption of farm food products of Canadian origin in 1949.

The tendency for the indexes in Chart 2 to diverge is an indication that the general spread between farm and retail food prices has increased between 1949 and 1958 and particularly since the early '50's. Price indexes of various groups of farm products are shown in Chart 3, along with the related retail food price indexes. The index for each commodity group has a particular character. The extent of the divergence of farm and retail prices is different for different product groups. Nevertheless, it is evident that a widening of the spread occurred in most cases.

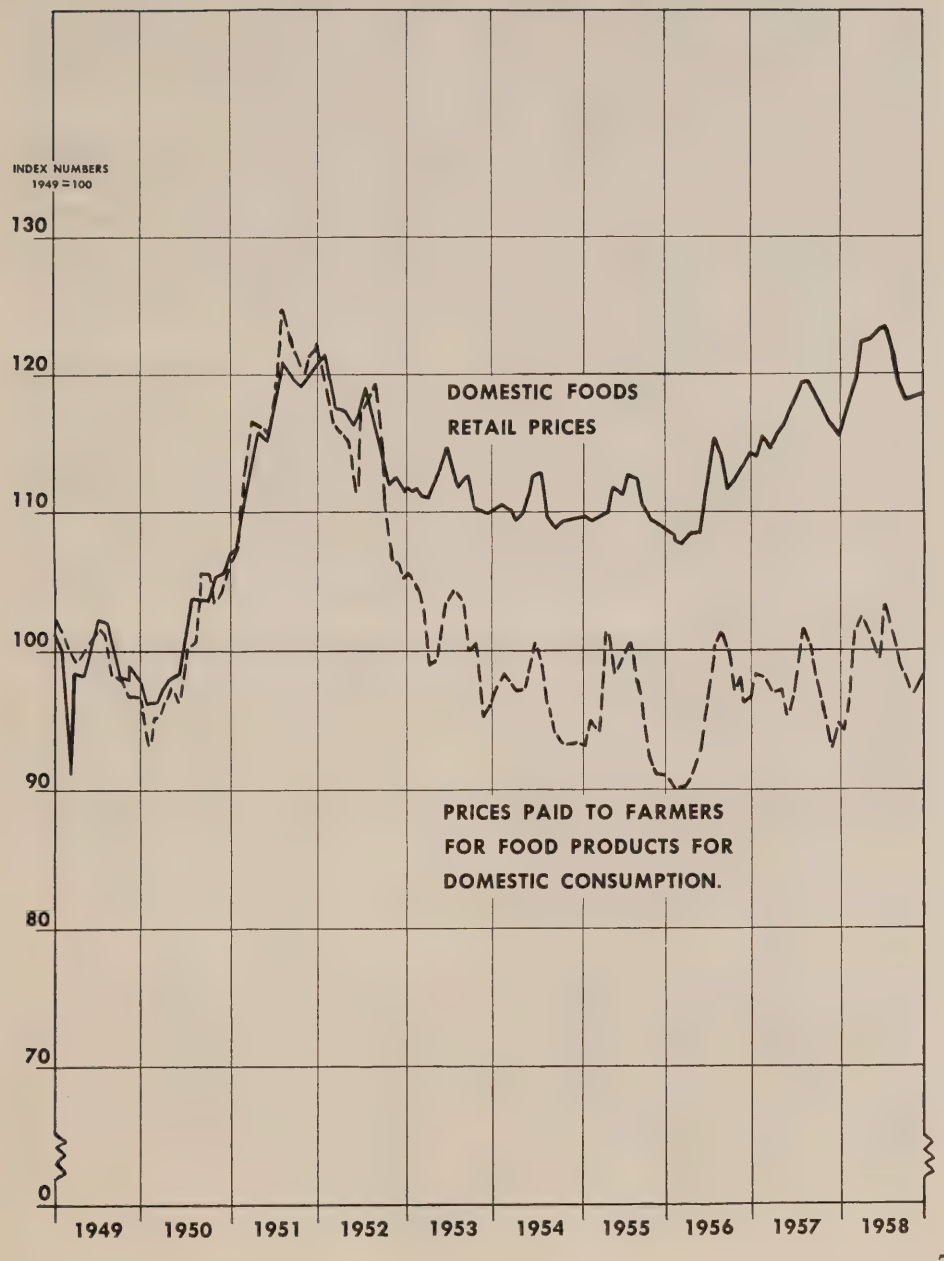
2. The Effects of Price Changes on the Position of the Consumer

As expressed to the Commission, the concern of consumers was directed to rising food prices and to various matters bearing on the efficiency of food marketing. References to the efficiency of food marketing are found in other parts of the report. At this point we refer to the effect of prices, and food prices in particular, on the position of the consumer.

CHART 2

RETAIL PRICE INDEX FOR FOOD OF A CLASS OR KIND PRODUCED IN CANADA AND FARM PRICE INDEX BASED ON DOMESTIC MARKET DISAPPEARANCE.

Constant Weights 1949=100



The general movement of retail prices, as measured by the Consumer Price Index, is represented in Chart 4. The chart also breaks down the index into several component groups, including the food group. The general index suggests that retail prices rose rapidly from 1949 to 1951, remained relatively stable from 1952 to 1954, and in 1955 began to move upward again.

From Chart 4 it is clear that the relation between prices (including additional services) changed significantly during the period. Since 1951, the index of retail prices of food has remained consistently below the indexes of prices of other groups of consumer goods, with the exception of clothing. We are inclined to attribute this, in substantial measure, to the conditions of supply of the farm ingredients about which we have more to say later in this part[1].

Over the period 1949 to 1958 personal disposable money income per capita[2] increased by $445, or at an average annual rate of increase of about 5%. The rate of increase was not uniform over the 10 years, however. Incomes rose rapidly in the early years, particularly in 1950 and 1951. The rate of increase was much slower in the next three years. In 1955 and again in 1956 there was a sharp increase in incomes, followed by a decline in the rate of income expansion in 1957. The rate increased again in 1958. (Table 2.)

Prices paid at retail also changed. In the early part of the period prices, as measured by the Consumer Price Index, increased rapidly, particularly in 1951. Between 1952 and 1954 both incomes and prices were relatively stable. Rising incomes in 1955 and 1956 were associated with a renewed upward movement of prices, although the rate of advance in prices was less than in 1950 and 1951. Adjusting money incomes for changes in the Consumer Price Index, it would appear that, over the period, personal disposable real income per capita[3] increased at an average rate of about 2% per annum. The increase was greatest in the later portion of the period.

We have already noted that the food component of the Consumer Price Index rose less rapidly than the general index over the whole period, and since 1951 has remained consistently below the general index. Food prices rose between 1949 and 1951, with a very rapid increase in the latter year. The index declined through each of the years 1952 to 1954. From 1955, food prices began to rise, the increase becoming significant in 1957 and 1958. In six of the years the rate of increase in the food component was less than the rate of increase in the total Consumer Price Index. *It follows from the analysis of food prices that real incomes in terms of food have increased more rapidly than in terms of commodities generally.*

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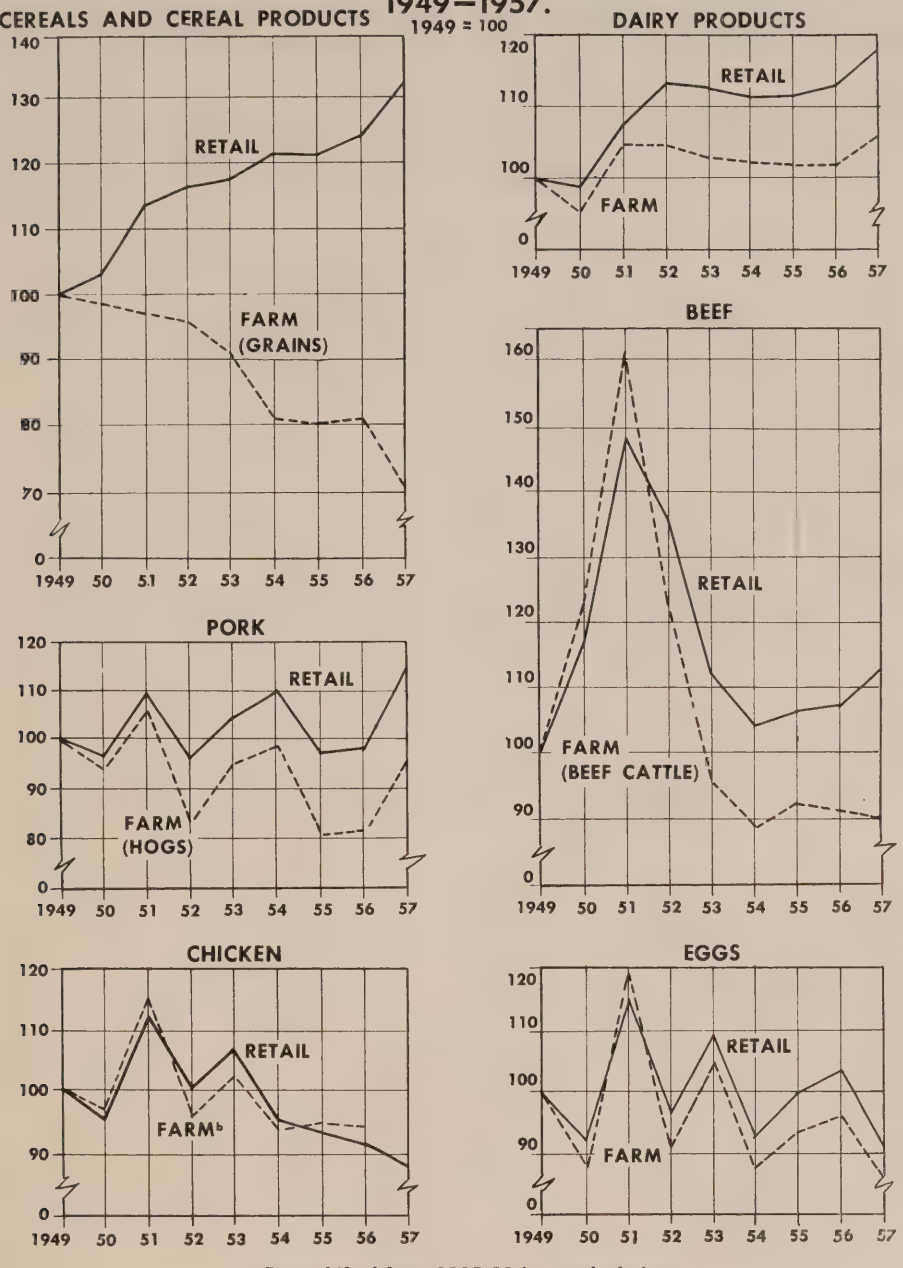
[1] See pp. 18-20.

[2] *Personal Disposable Income* equals personal income less direct taxes (including income taxes and succession duties). Personal income measures all income received by Canadian residents and includes: (1) factor income of persons; (2) transfer payments received by persons; (3) investment income and investment income accumulated on behalf of persons by life insurance companies, private pension funds, etc. (It *excludes* incomes of the factors of production which are not paid out to persons, such as undistributed corporation profits and profit of government enterprises.) (4) For farm operators and other unincorporated businesses the whole net income is included since it is not statistically feasible to separate withdrawal for personal use from amounts retained in the business. Therefore, personal income includes the change in the book value of the inventories of unincorporated businesses—including farm inventories.

[3] Whenever we refer to real income in this part of the report, we will be measuring the income in 1957 dollars, having adjusted the money income data by the relevant price index.

CHART 3

PRICE INDEXES OF SELECTED GROUPS OF FARM PRODUCTS[a] AND RELATED FOOD GROUPS IN THE CONSUMER PRICE INDEX 1949–1957.

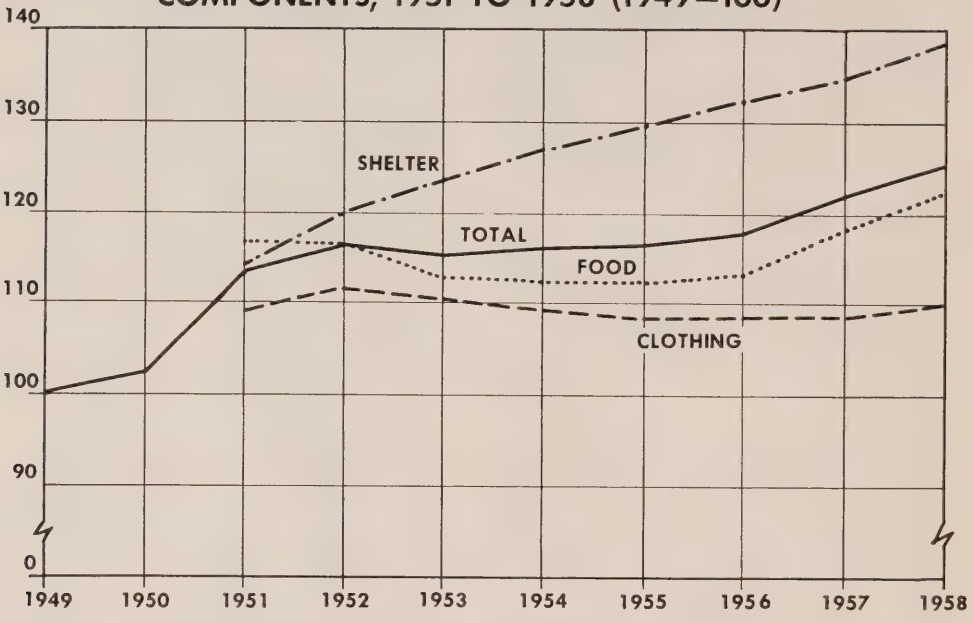


a—Base shifted from 1935-39 by recalculation.

b—1957 Not available

CHART 4

THE CONSUMER PRICE INDEX, TOTAL 1949 TO 1958 AND COMPONENTS,[a] 1951 TO 1958 (1949=100)



a— "Household Operation" and "Other Commodities and Services" not shown.

Table 2—Personal Disposable Money and Real Income per Capita, 1949 to 1958

Period	Personal Disposable Money Income Per Capita		Consumer Price Index		Personal Disposable Real Income Per Capita		Food Component Consumer Price Index	
	$	Change %	1949=100	Change %	1957 $	Change %	1949=100	Change %
1949	881	—	100.0	—	1,100	—	100.0	—
1950	925	5.0	102.9	2.9	1,119	1.7	102.6	2.6
1951	1,056	14.2	113.7	10.5	1,158	3.5	117.0	14.0
Total Change 1949-51	175	19.9	—	13.7	58	5.3	—	17.0
Annual Change 1949-51	88	9.5	—	6.7	29	2.6	—	8.2
1952	1,112	5.3	116.5	2.5	1,186	2.4	116.8	−0.2
1953	1,139	2.4	115.5	−0.9	1,216	2.5	112.6	−3.6
1954	1,111	−2.5	116.2	0.6	1.171	−3.7	112.2	−0.4
Total Change 1951-54	55	5.2	—	2.2	13	1.1	—	−4.1
Annual Change 1951-54	18	1.7	—	0.7	4	0.3	—	−1.3
1955	1,168	5.1	116.4	0.2	1,229	5.0	112.1	−0.1
1956	1,253	7.3	118.1	1.5	1,297	5.5	113.4	1.2
1957	1,272	1.5	121.9	3.2	1.272	−1.9	118.6	4.6
1958	1,326	4.2	125.1	2.6	1,292	1.6	122.1	3.0
Total Change 1954-58	215	19.4	—	7.7	121	10.3	—	8.8
Annual Change 1954-58	54	4.5	—	1.9	30	2.5	—	2.2
Total Change 1949-58	445	50.5	—	25.1	192	17.5	—	22.1
Annual Change 1949-58	49	4.6	—	2.5	21	1.8	—	2.2

The statement that the real incomes of Canadian consumers have increased since 1949, and particularly since 1951, is a generalization. A few illustrations are sufficient to show a wide range in the rates at which real incomes of groups of consumers have changed since 1949. In 1956, the Consumer Price Index (base 1949) stood at 118.1; the food component at 113.4. Income tax statistics[1] show that for certain occupational groups, the average incomes for those with taxable returns increased, 1949 to 1956, as follows: "Total Professionals", 42.0%; "Employees of Businesses", 34.6%; "Pension Income Predominates", 10.7%. It would appear that, over the period, the group receiving mainly pension income experienced some decline in real incomes.

Factors Affecting Retail Prices for Food Products

This part of our inquiry is concerned with the difference between farm prices and prices paid by consumers for food products of farm origin. In a narrow sense we are concerned with what happens between the farm and the consumer. In another, and broader sense, we have been asked to inquire into the factors which determine farm prices and the factors which determine retail prices, and thus to explain the differences between them. But this necessarily takes us beyond what happens between the point at which the farm material leaves the farm and the point at which the consumer acquires the food product. The price received by the farmer is affected by what happens on the farm and by what determines the supply of farm materials. The price paid by the consumer is affected by what happens outside of the food market and by what determines the demand for food products.

We will have a good deal to say about consumer demand which can be most usefully said at other points in our report. One or two comments of a general nature will be sufficient here.

We have already mentioned one of the major factors affecting consumer demand for food, viz., consumer incomes, and we have traced the changes in consumer incomes over the period 1949 to 1958. The incomes of consumers are not generated within the food industries only. The demand for food products is therefore affected, through incomes, by factors operating in other parts of the economy.

No one would doubt that there is a relation between incomes and prices. The relation is, however, a complex one, and the effect of income changes may be obscured by the occurrence of other changes which affect prices in another direction. We suggest, nevertheless, that the data in Table 2 support the view that the movement of prices as measured by the Consumer Price Index and the movement of food prices as measured by the food component of the Index were both related in part to changes in incomes. The rise in money incomes in 1950 and 1951 was a factor causing the sharp rise in prices, including food prices, in 1951. The slower rate of advance in incomes in 1952 and 1953, and the decline in incomes in 1954, were associated with the relatively stable general price level and the decline in food prices during these years. It seems clear that the increase in money incomes in 1955 and 1956 contributed to the upward movement of prices evident in 1957.

[1] "Individual Income Tax Data", *Taxation Statistics*, Department of National Revenue, published annually.

An increase in disposable income per capita, which may be brought about in a number of ways, means that consumers are in a position to increase their expenditures on food and usually they are willing to do so. The portion of the increase in incomes which will be directed to food purchases depends on a number of factors. From many studies of consumer expenditures on food certain regularities are apparent. First, the portion of the increase in incomes which is directed to food expenditures declines with increasing incomes. Second, expenditures on some food products increase more rapidly than expenditures on others. There is indeed some substitution, and expenditures on some foods may even decrease.[1] Third, more of the increase in expenditures will be directed to paying for services associated with food, than to paying for the farm constituent. We can put this another way. When incomes rise, there is a greater increase in demand for other things than for food; there is a greater increase in the demand for some foods than for others; there is a greater increase in demand for food services than for food materials. Nevertheless, with an increase in incomes, the initial effect is to increase prices of food materials. A decrease in incomes has the opposite effect.

Consumer demand for food is determined by other factors as well as incomes, e.g., changes in age distribution, nature of employment, and subjective changes in consumers' attitudes. However, the observed regularities to which we have referred indicate that, in practice, these other factors operate within fairly narrowly prescribed limits related to income and, in the case of particular products, to relative prices. It is conceivable that we could all become vegetarians, but in practice this sort of revolutionary change in consumption habits does not happen. Changes do occur, as the surge of new products between 1949 and 1957, receiving the approval of consumers, makes clearly evident. But again, substitution may occur, and the desire and willingness to pay for these new products does not mean a comparable change in the demand for food as a whole. These considerations are important in interpreting the effects of advertising and promotion of particular products, and we shall have occasion to return to them in later sections of the report.

3. The Effects of Price Changes on the Position of the Primary Producer

Farm representatives were sensitive to any implication that rising retail prices were caused by upward pressure of farm prices. They emphasized the decline in farm prices since 1951, when other prices were tending to rise, and the consequent effect on the incomes of farmers. There was frequent reference to the "Cost-Price Squeeze".[2]

In a period of generally rising prices, all prices are influenced by factors which tend to make them move together. We have noted that increases in retail prices went along with increasing incomes. Although the growth was irregular, we can say that aggregate demand increased from 1949 to 1958. All price changes have, therefore, occurred during a period of rising demand. However, even under these conditions some prices have been falling. We have seen from Chart 1 that from

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1 During the past 10 years, per capita expenditures on potatoes have decreased. See Volume II, Part V.

2 For example, see the briefs presented by the Interprovincial Farm Union Council (*Proceedings*, p. 3920), the Canadian Federation of Agriculture (p. 4703) and the Saskatchewan Farmers Union (p. 1388).

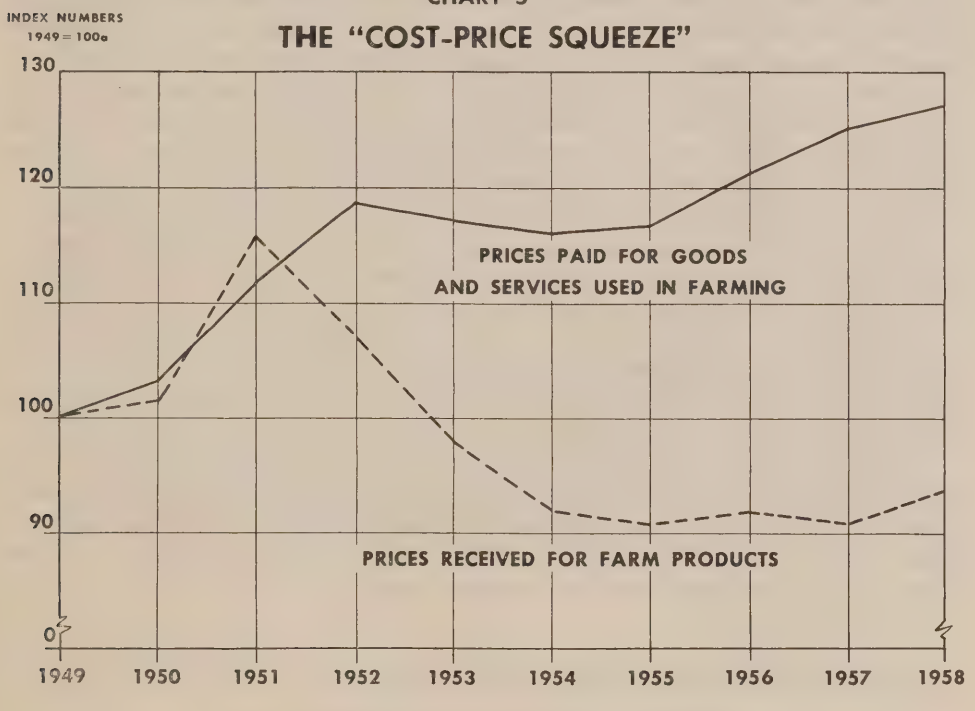
1951 farm prices declined over seven years until they turned upward in the latter part of 1957. Similar price declines were recorded for some other raw materials, for example, raw cotton, wood pulp, lead and zinc.

While the prices of farm products were falling, the prices of many things used by farmers, as producers, were increasing. This condition is referred to as the "Cost-Price Squeeze". The phenomenon is illustrated in Chart 5.

We have observed in our discussion of the interpretation of price indexes that a decline in the index of prices received by farmers does not necessarily mean that gross farm incomes have been declining. An increase in gross incomes of producers, whether measured as aggregate income, income per farm, or income per capita, may occur even if prices received are declining. Similarly the Index of Prices Paid by Farmers for Goods and Services Used does not tell us whether the costs of production, measured as aggregate costs, costs per farm, or costs per unit of a product, have increased or decreased. To determine this, it would be necessary to know the quantities used in the aggregate or per farm, and in the case of costs per unit, the quantities of the product produced. What the Index of Prices Paid by Farmers for Goods and Services Used does tell us is that production expenditures would have been less than they actually were if the prices of things used had not advanced as they did.

Fortunately, the Dominion Bureau of Statistics provides a more direct means of observing what has been happening to farm incomes. We are aware that the attempt to estimate gross farm income and operating expenses and depreciation

CHART 5



a—Base shifted from 1935-39 = 100 by recalculation.

presents the statistician with difficult problems. We do not underrate these difficulties. However, we are satisfied that the estimates prepared by the Dominion Bureau of Statistics come much closer to a correct view of the changes in incomes from farming operations than could be derived from price indexes alone.

We have reported on the effects of price changes on the position of the consumer. The income figures we have used in the earlier section include the incomes of farm people, but it is not possible to separate out farm incomes from the estimates of disposable money incomes. However, we do wish to look at the effects of price changes on farm people *as consumers*. For this we need a measure of farm incomes which is comparable to the measure of disposable incomes for consumers generally.

The Dominion Bureau of Statistics estimates various components of farm incomes, and from these several different measures of farm incomes can be built up. The measure which seems to us most useful in studying the changes in the income position of farm people *as consumers* may be referred to as "net farm operating income". This consists of the sum of (a) sales off farms, (b) direct consumption on farms, and (c) supplementary payments, *less* cash operating expenses, not including depreciation. The estimates of "sales off farms" measure the cash income received in any year from farming operations. We recognize that, if farmers are carrying inventories of products, part of the cash income received in the year may have come from sales out of carry-over. In considering farm people as consumers, we feel that these cash receipts can be appropriately included as income in the year the cash is received. Direct consumption on the farm, including produce consumed and use of the dwelling house, must be added to cash incomes. Supplementary income from government sources, received during the year, is current income. We add these three values to obtain the gross farm operating income. We then deduct the estimate of cash operating expenses. This does not include cash paid out for capital items, e.g., new machinery. In arriving at net farm operating income, changes in inventories enter into the value for a year if cash income has been obtained during the year by sales out of carry-over. However, additions to stocks are not shown as income in the year in which they have been accumulated. In our view, the measure of net farm operating income comes as close as can be to the measure of disposable income, except on one point. It is known that people living on farms obtain some income from employment off the farm. Unfortunately, no useful estimate of the amount of income from this source is available. Its inclusion would raise the level of estimated incomes by an amount unknown and we have no clear evidence on how it would affect the changes in farm incomes from year to year, or over the whole period.[1]

To convert from net farm operating income to "real income" two price indexes have been used. The portion of net farm operating income represented by direct consumption of food has been deflated using the Index of Farm Prices of Agricultural Products; in deflating the portion of net farm operating income derived from other sources, the Index of Prices of Goods and Services Used in Farm Family Living has been used.

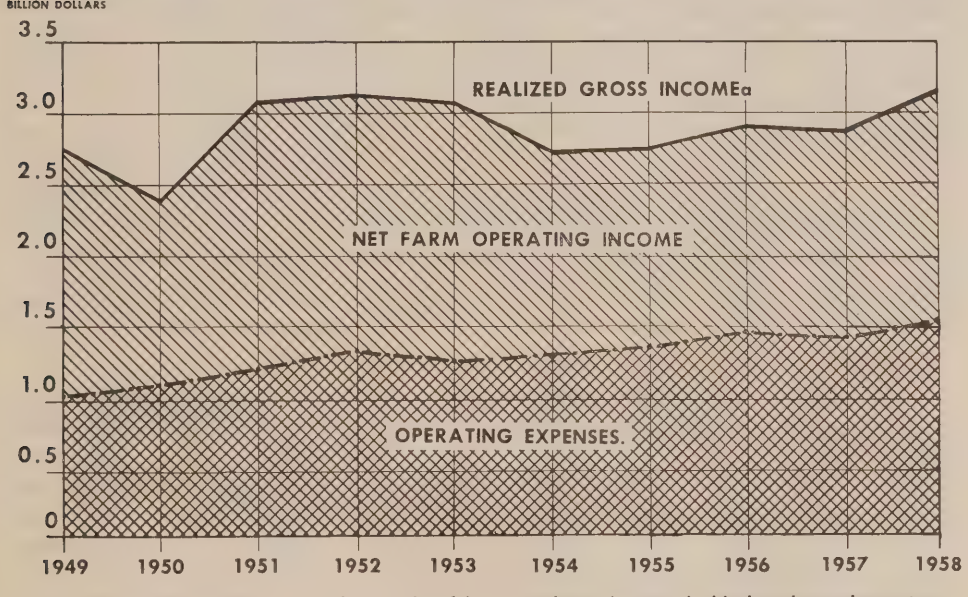
[1] The Dominion Bureau of Statistics is currently analyzing the information obtained in an extensive farm income and expenditure survey taken in 1958.

We realize that other measures of farm incomes could have been used, and that the choice of measure might have some effect on the conclusions to be drawn from the data. However, we looked at other measures than net farm operating income and have found that they do not significantly affect the major conclusion to be drawn from our analysis, viz., that in a period when the real incomes of Canadian consumers in general were rising, farm real incomes were not. We include Chart 6 which presents a picture of the changes in aggregate net farm operating income and Table 3 which provides data on income per farm in actual and in real terms.

We have referred to the difficulty of drawing inferences about farm incomes from price indexes alone. The importance of this point can be illustrated from Table 3, in which we have included the index of farm prices, an index of volume of production, and an index of Prices Paid by Farmers for Goods and Services. During the period 1949 to 1958, the years in which the greatest changes in incomes occurred were 1951 and 1954. It is evident that the large increase in income per farm in 1951 came about as a result of much higher prices and much larger output than in 1950. The substantial decline in farm income in 1954 was evidently brought about mainly by a considerable decline in output between 1953 and 1954. Table 3 also shows that sometimes (e.g., 1953) price and output have changed in the same direction, and sometimes they have changed in opposite directions (e.g., 1952).

CHART 6

NET FARM OPERATING INCOME, CANADA 1949 TO 1958.



a—The sum of cash income from sale of farm products, income in kind and supplementary payments.

Source: D.B.S. Reference Paper No. 25 (Part II) and FARM NET INCOME 1955 annual.

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Table 3—Net Farm Operating Income and Real Income per Farm, Canada, 1949 to 1958

Period	Index of[a] Farm Prices		Index of[b] Farm Costs		Index of[c] Farm Output		(Actual) Net Farm[d] Operating Income		(Real) Net Farm Operating Income[d]	
	1949=100	Change %	1949=100	Change %	1949=100	Change %	$ per Farm	Change %	1957 $ per Farm	Change %
1941	43.1	—	56.9	—	89.2	—	932	—	1,783	—
Total Change 1941-49	—	11.1	—	+75.7	—	+12.1	+1,744	+187.1	+1,414	+79.3
Annual Change 1941-49	—	+12.1	—	+7.3	—	+1.5	+218	+14.1	+177	+7.6
1949	100.0	—	100.0	—	100.0	—	2,676	—	3,197	—
1950	102.2	+2.2	103.1	+3.1	112.7	+12.7	2,129	−20.4	2,466	−22.9
1951	116.2	+13.7	112.7	+9.3	126.5	+12.2	3,059	+43.7	3,185	+29.2
Total Change 1949-51	—	+16.2	—	+12.7	—	+26.5	+383	+14.3	−12	−0.4
Annual Change 1949-51	—	+7.8	—	+6.1	—	+12.5	+191	+6.9	−6	−0.2
1952	107.5	−7.5	119.1	+5.7	135.9	+7.4	3,098	+1.3	3,081	−3.3
1953	98.1	−8.7	117.5	−1.3	129.1	−5.0	3,054	−1.4	3,155	+2.4
1954	92.7	−5.5	116.2	−1.1	97.9	−24.2	2,378	−22.1	2,457	−22.1
Total Change 1951-54	—	−20.2	—	+3.1	—	−22.6	−681	−22.3	−728	−22.9
Annual Change 1951-54	—	−6.3	—	+1.0	—	−7.0	−227	−6.9	−243	−7.1
1955	91.2	−1.6	116.8	+0.5	123.0	+25.6	2,335	−1.8	2,424	−1.3
1956	91.9	+0.8	121.3	+3.9	138.6	+12.7	2,659	+13.9	2,753	+13.6
1957	91.1	−0.9	125.3	+3.3	109.2	−21.2	2,633	−1.0	2,633	−4.4
1958	93.9	+3.1	125.4	+0.1	114.0	+4.4	3,008	+14.2	2,946	+11.9
Total Change 1954-58	—	+1.3	—	+7.9	—	+16.4	+630	+26.5	+489	+19.9
Annual Change 1954-58	—	+0.3	—	+1.9	—	+3.9	+157	+6.1	+122	+4.6
Total Change 1949-58	—	−6.1	—	+25.4	—	+14.0	+332	+12.4	−251	−7.9
Annual Change 1949-58	—	−0.7	—	+2.5	—	+1.5	+37	+1.3	−28	−0.8

[a] Index of Farm Prices of Agricultural Products. (Base shifted from 1935-39=100 by recalculation.)

[b] Composite Index of Prices of Commodities and Services Used by Farmers, exclusive of living costs. (Base shifted from 1935-39=100 by recalculation.)

[c] Index Numbers of Physical Volume of Agricultural Production. (Base shifted from 1935-39=100 by recalculation.)

[d] "Net Farm Operating Income" is the sum of cash income from the sale of farm products, income in kind and supplementary payments *less* cash expenses. It does *not* allow for depreciation.

In order to place the changes from 1949 to 1958 in the perspective of a longer term, we have included in Table 3 the change in income per farm over the period 1941 to 1949. At the outbreak of war in 1939, the farm industry was beginning to emerge from the disastrous depression and successive droughts of the '30's. During the war and in the postwar years to 1949, farm incomes rose substantially because of both increased output and higher prices. The average annual increase over the period 1941-49 was $218 or an average rate of increase of 14.1% per annum.

Between 1949 and 1951 incomes rose by $383 per farm, or at an average annual rate of 6.9%, the increase being wholly in 1951. Incomes remained high,

with little change in 1952 and 1953, but the sharp fall in 1954 reduced incomes below the 1949 level. Since 1954, incomes have tended to increase, the annual rate of increase averaging 6.1%.

The income data are corrected for price changes using the two deflators we have mentioned. We call attention to the fact that, although the indexes in Chart 1 might suggest that the farmers' position was greatly improved by the price increases occurring beween 1949 and 1951, it is evident from Table 3 that real farm incomes actually did not increase during this period. The gains from rising incomes were offset by the increases in prices paid by farmers as producers and consumers. The decline in incomes from 1952 to 1954, along with continued advance in consumers' prices, resulted in a deterioration in the real incomes of farm people. Since 1954, their real incomes have tended to increase, the annual rate of increase averaging 4.6%. A considerable part of this increase occurred in 1958.

Taking the whole period from 1949 to 1958, income per farm has increased slightly but, with prices paid by farmers as consumers increasing, real incomes have declined at an average annual rate of 0.8%.[1] This can be compared with the earlier estimate of an increase in personal disposable real income per capita for consumers generally of 2%. The significant conclusion is that, in a period when real incomes generally were rising, farm real incomes were not.

In dealing with the position of consumers generally, we noticed that different groups of consumers had experienced different rates of improvement in real incomes, and that in some instances real incomes had apparently declined. Similarly, changes in prices have not had identical effects on all groups of farm people. The differences are due to a number of factors, among them the direction of change in prices of particular products. Unfortunately, it is not possible to compare farm incomes on the basis of specialization of production. We do know, however, that the type of farming, including the proportion of different products produced on farms, varies appreciably in the major geographical regions of the country. We have, therefore, made a study of the changes in net farm operating income, actual and real, by regions. For our purposes, the changes in real incomes are more significant. The relevant data on real incomes are found in Table 4.

The main point to be stressed is the much greater year-to-year variability of real incomes in the Prairie Provinces. In this region real income in 1951 was 47.4% higher than in 1950. In 1954 real income declined 35.3% from the 1953 level. Again between 1955 and 1956, real incomes in the Prairie Provinces increased 37.1%.

In the Maritime Provinces, while there were some year-to-year variations, incomes did not change greatly in any of the three periods. In Quebec incomes increased between 1949 and 1951, but declined in each of the succeeding periods. Incomes of Ontario farmers also increased during the first period and, after a sharp decline between 1951 and 1954, increased in the last period. In British Columbia incomes declined in the first two periods but increased between 1954 and 1958 as they did in most other areas.

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[1] In considering the income position of farmers as consumers we have treated the farm as a household. To look at the changes in incomes per capita we would have to take account of the change in the number of persons per farm unit. Between 1951 and 1956 the numbers increased from 4.7 to 4.8, which indicates that we have not overstated the decline in the income position of farmers as consumers by considering income on a per farm basis.

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The generalization that over the period 1949 to 1958 real incomes per farm declined applies to all regions. The average rate of decline in the Prairie Provinces (1.3%) was greater than in the other regions.

Table 4—Changes in Real Net Farm Operating Income per Farm, by Regions, 1949 to 1958[a]

(Per Cent Changes)

Period	Canada	Maritime Provinces	Quebec	Ontario	Prairie Provinces	British Columbia
1950	−22.9	+2.3	+1.1	−10.6	−36.0	−7.6
1951	+29.2	−3.2	+7.8	+21.6	+47.4	+1.8
Total Change 1949–51	−0.4	−1.0	+9.0	+8.7	−5.6	−5.9
Annual Change 1949–51	−0.2	−0.5	+4.4	+4.3	−2.7	−2.9
1952	−3.3	0.6	−6.6	−13.7	+1.5	−9.9
1953	+2.4	−13.7	−1.0	+0.5	+5.6	+8.4
1954	−22.1	+13.0	−0.7	−9.8	−35.3	−3.5
Total Change 1951–54	−22.9	−3.1	−8.2	−21.8	−30.6	−5.8
Annual Change 1951–54	−7.1	−1.0	−2.7	−6.8	−9.3	−1.9
1955	−1.3	−4.1	+6.6	+9.1	−9.8	−3.6
1956	+13.6	+16.1	−12.0	−4.9	+37.1	+7.0
1957	−4.4	−7.9	+0.2	+1.0	−8.3	+1.1
1958	+11.9	+1.5	+2.7	+9.0	+17.7	0
Total Change 1954–58	+19.9	+4.2	−3.4	+14.2	+33.5	+4.3
Annual Change 1954–58	+4.6	+1.0	−0.8	+3.4	+7.5	+1.1
Total Change 1949–58	−7.9	−0.1	−3.4	−3.0	−12.6	−7.5
Annual Change 1949–58	−0.8	0	−0.4	−0.3	−1.3	−0.8

[a] "Net Farm Operating Income" is the sum of cash income from the sale of farm products, income in kind and supplementary payments *less* cash expenses. It does *not* allow for depreciation.

Factors Affecting Farm Prices for Agricultural Products

In our analysis of incomes, it became evident that changes in farm incomes in the prairie region were significantly different from the changes in other parts of Canada, and that these differences were related to the degree of specialization in wheat production in the prairie region. Wheat output is highly variable from year to year, causing relatively violent annual fluctuations in incomes of prairie farmers. We have also noted that, following the period of generally rising prices (to 1951), prices of wheat and other grains fell more rapidly than the prices of other farm products. Clearly, wheat prices, and through them the incomes of prairie farmers, have been affected by factors other than those affecting the prices of other farm materials.

The peculiar factor in the case of wheat prices is the dependence on markets outside Canada. If Canadian wheat is to be sold at the same price to all buyers, the price which can be obtained for Canadian wheat for export is the price which will prevail. This price is only slightly affected by conditions peculiar to Canada. On the other hand, prices of products which are produced in smaller quantities relative to the domestic demand, e.g., beef, tend to be more affected by domestic conditions. These prices can, within limits, move independently of prices for the

same products in other countries. However, as the price of grains enters into the costs of producing other farm products, the price of wheat and other grains becomes a factor affecting the supply and therefore the prices of those other products on the Canadian market.

It seems evident to us that the decline in the prices of raw materials including the prices of agricultural products, which began in 1951 was a phenomenon affecting all countries united together by the system of international trading.[1] The break in prices was not unrelated to the conditions in the immediately preceding period. The outbreak of the Korean War, and the possibility of extension of hostilities affected prices in two ways. Increased public expenditures connected with the buildup of military potential had the general effect of expanding incomes and advancing prices. Included in this buildup was the stockpiling of strategic materials. The cessation of hostilities, the cut-back in government expenditures, anti-inflationary financial and fiscal policies, and the sharp reduction in demand for materials, all contributed to the break in prices in 1951. These factors affected the Canadian economy but were not peculiar to it. However, it is the consequences *in* Canada with which we are concerned.

We have already noted the substantial increase in personal disposable money incomes which occurred from 1949 to 1951 (19.9%). The associated increase in domestic demand affected the prices of all domestically produced commodities. At the same time there was a strong demand in export markets. Domestic demand and export demand both combined to strengthen prices during this period. The break in prices in 1951 was caused both by a slowing down in demand and by the pressure of supplies to which we refer later. The fact is that after 1951 the rate of increase in personal disposable incomes slowed down, and difficulties began to be experienced in export markets.[2] Aggregate domestic demand actually declined in 1954. Subsequently personal disposable money incomes rose rapidly. This undoubtedly strengthened domestic demand and helped to support farm prices in later years. However, the difficulties experienced in the export markets for wheat continued.

To appreciate fully the causes of the decline in agricultural prices in Canada, we must look at what was happening on Canadian farms in the years immediately prior to 1951. The developments of particular importance were the rapid rate of investment in mechanical equipment, the decline in the numbers employed in agriculture and the increase in productivity per worker.

Between 1946 and 1951, average annual sales of farm implements and machinery increased from $82 million to $236 million. In the three years 1949 to 1951, farmers acquired new equipment to the value of $670 million. The incentive for this phenomenal rate of new investment was provided by rising prices and increasing shortage of labour and was made possible by increasing incomes. In effect it provided for necessary replacements which could not be made during the period of wartime shortages, replaced horses as the motive power, stocked Canadian farms with new and more efficient machinery, and enlarged the productive

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1 See section 4 of this part, "Changes in Relative Prices in Other Countries".

2 During the early '50's world food production was increasing rapidly. An index of world food production *per capita* increased from an average of 98 for the years 1948/49 and 1949/50 to an average of 104 for the years 1952/53 and 1953/54 (average 1948/49-1952/53=100). In Western Europe, particularly, the increase was very great, from 92 to 108. (*The State of Food and Agriculture, 1958, F.A.O.*, Table II-3, p. 12).

capacity of the industry. At the same time, the number of workers in agriculture declined each year from 1,190,000 in 1946 to 943,000 in 1951, a decrease of about 20%. The trend in output per farm worker is shown in Chart 7.

We have seen in Table 3 that, despite the fall in prices, the high level of net farm operating income reached in 1951 was maintained through 1952 and 1953. Investment in new equipment continued at a high rate. Sales of farm implements and machinery totalled almost $600 million in the two years 1952 and 1953. The number of workers declined to 863,000, a further drop of close to 10%. The increase in output per worker which continued after 1951 is evident in Chart 7.

We have, we believe, assembled sufficient evidence to establish that the conditions of production on farms prior to 1951 built up a pressure of supplies which contributed to the break in farm prices in 1951, and continued to exert its influence in the years following.

4. Changes in Relative Prices in Other Countries

The Commission has made a study of the movements of prices in other countries during the '50's. The study discloses an almost universal tendency for the general price level to rise. No country has escaped a general increase in retail food prices, except the United Kingdom where food prices have declined slightly. The

CHART 7

TREND IN OUTPUT PER MEMBER OF THE FARM LABOUR FORCE, CANADA, 1941 TO 1958.

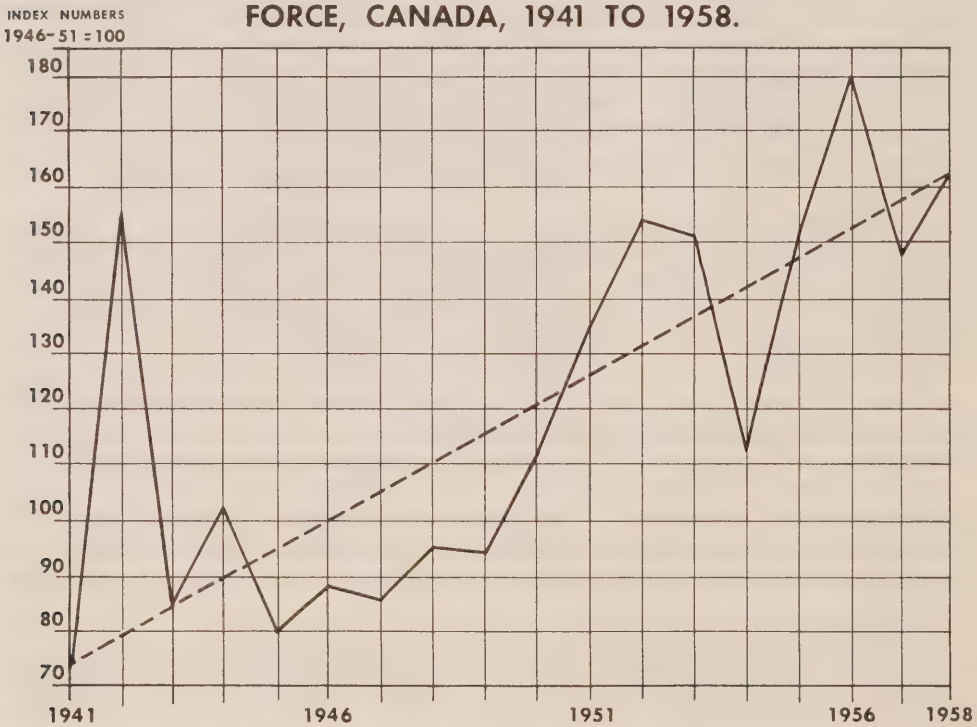
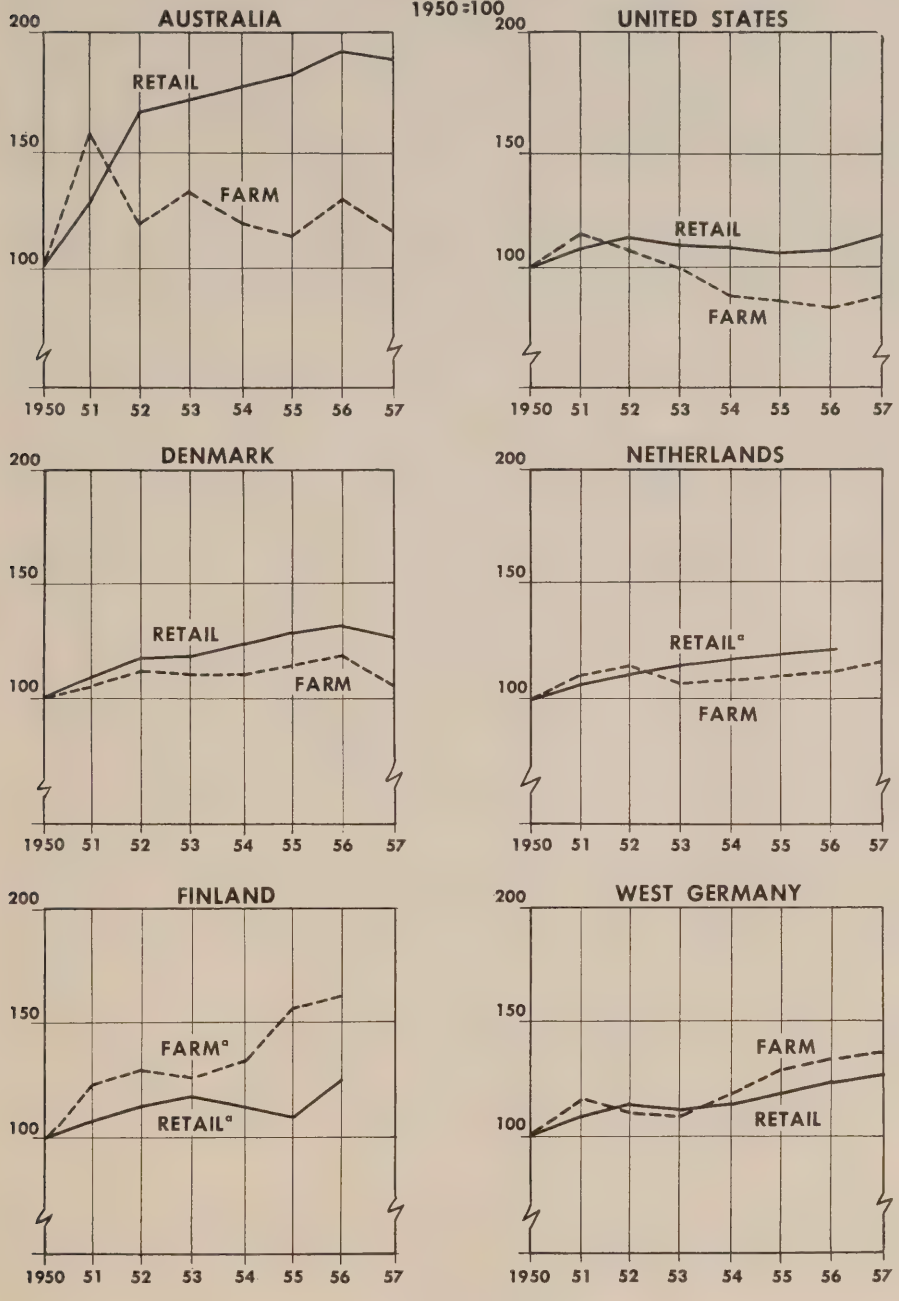


CHART 8

FARM PRICES AND RETAIL FOOD PRICES IN OTHER COUNTRIES, 1950 TO 1957.



a—1957 not available.

direction of change of farm prices has been different. Countries which, along with Canada, have experienced a tendency to falling farm prices include South Africa, Australia and the United States. In another large group of countries, including Norway, Denmark, Netherlands, Switzerland, Belgium and France, farm prices have tended upwards, but at a less rapid rate than retail food prices. In both these groups of countries, the relative changes in farm and retail food prices were such as to indicate an increase in the "spread". A few illustrations are shown in Chart 8. There have been a few countries, among which there is no large food-exporting country, in which the spread has apparently narrowed. These include Japan, Greece, West Germany, Austria and Finland.

This part of our study indicated that the general problem we set out to investigate is not peculiar to Canada, and that the widening of the price spread for food products has been a phenomenon experienced in most countries in the '50's.

PART II

THE FUNCTIONS AND STRUCTURE OF THE FOOD MARKETING SYSTEM

CHAPTER 1.

INTRODUCTION

People speak of "the market" for a certain product, but in our complex economy a product is hardly ever disposed of in a single transaction. Most products pass through several hands, are bought and sold several times, and may even change in form at several stages. Before we discuss in general terms market structure and the functions performed by firms engaged in the food industry, let us consider the marketing of wheat and poultry. We have selected these two examples of marketing processes to illustrate the complexities of the marketing system before we begin a detailed discussion of food retailing, wholesaling, processing and assembling.

Our particular examples, wheat and poultry, were selected because they reflect two quite different results of the play of economic and social forces in the evolution of marketing systems. The wheat marketing system in effect in the western provinces today is the result of a long and continuous process of adjustment both to production and to market conditions, with governments playing an active role. The culmination of this activity on the part of governments was, of course, the establishment of the Canadian Wheat Board which is responsible and reports to the Department of Trade and Commerce of the Federal Government.

By way of contrast, the marketing of poultry for meat up until recent years was in the main a local process and in effect was comprised of thousands of marketing situations, ranging widely in scale, and varying in type from direct sales by farmers to consumers, to sales to assemblers who in turn sold the poultry to others in the marketing system. But in a relatively short period of time, a matter of a few years, the poultry marketing situation and system has changed almost completely. This, in our view, can be attributed chiefly to the rapid application of a whole new range of techniques of production and processing of the broiler chicken.

Whatever contrasts and differences may be thrown into relief by use of the two examples, it is not our purpose at this point in the report to convey directly or by inference any suggestion of particular virtues or faults in the various commodity marketing systems. There is more explicit comment on some of the issues raised about these marketing systems in later sections of this part and in Part V.

1. The Marketing of Wheat

Wheat used for bread flour production is grown on nearly two hundred thousand farms in the Prairie Provinces and the Peace River region of British Columbia. Although small quantities of bread-type wheats are grown elsewhere

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as well, we shall look at the typical marketing pattern for the Prairie Provinces. Wheat grown on two hundred thousand farms must be collected at points where it can be forwarded or can be held awaiting shipment. Our comments in this section relate only to the marketing of wheat to be consumed as bread in Canada. Wheat, of course, flows through marketing channels destined for many other uses in Canada and elsewhere.

The farmer brings his wheat by truck to a warehouse known throughout the grain-growing region as a country elevator. Clusters of these country elevators, dominating the prairie landscape, are the first collecting points in the marketing system where the functions of *assembling* and *buying* grain are carried out. Each country elevator is operated by an agent of a company which may own a string of these warehouses scattered across the prairies.

The actual process of buying the grain from the farmer is facilitated by the existence of standard grain grades established by the Canadian Government. Here the function of product *standardization* appears.

Settlement with the deliverer of the grain at the country elevator is made on the basis of a price determined much further forward in the marketing system. Canadian grain prices are set in terms of a "Lakehead" (Fort William-Port Arthur) quotation. The price used to make settlement with the farmer, therefore, is that given for the appropriate grade at the Lakehead, less freight, elevator handling, and certain other charges and adjustments.

If there is an insufficient quantity of wheat of a particular grade to make up a carload, or if the grain-handling facilities further on in the marketing system are overloaded, then the grain will be held in the elevator, well protected against the elements and natural pests. The function of *storing,* therefore, enters at this point. Eventually the grain is loaded into box cars and these move in trainloads toward the Lakehead; this illustrates the *transportation* function.

While the operator of a country elevator is the agent of a line elevator company, the company in turn is only an agent of the Canadian Wheat Board, and the Board itself an agency of the Canadian Government. When the wheat moved out of the farmer's possession, ownership was transferred to the Canadian Wheat Board. The Canadian Wheat Board in fact advanced the first payment to the farmer, and, because the grain may be held by the Board for several months before sale, it must borrow funds from the banks in order to pay farmers immediately on delivery. The banks thus facilitate the marketing process by performing a *financing* function.

There are elements of risk in the moving and storing of wheat. There are possibilities of fire and explosion in grain elevators; there are possible losses of vessels on the Great Lakes. Against these risks the grain has been insured by an insurance firm; this firm is carrying out a facilitating function called *risk bearing.* We note here that under Canadian Wheat Board operations risk bearing in price fluctuations is now borne by the Government and by the buyers.

Although there are a number of flour mills in Western Canada, a considerable part of the wheat destined for flour milling moves down the Great Lakes and is manufactured into flour in mills in Ontario and Quebec. We will follow the events in bringing wheat to Central Canada for milling. The flour mill must purchase its supplies of wheat from the Canadian Wheat Board which performs a function of

selling as well as of *buying*. The grain from hundreds of country elevators has been assembled in store at the Lakehead terminal elevators. On the way to this assembly position, the carloads of grain are sampled and *graded* at Winnipeg. When the grain is being put into the terminal elevator, it is again sampled and graded.

Most of the wheat is shipped from the Lakehead terminals to the flour mills by lake boats. It may also move by train and by truck before reaching its destination at a mill in Ontario or Quebec.

Most flour mills have space for *storing* grain, and they withdraw it from storage bins in accordance with their level of milling operations. By appropriate blending of grades of wheat and the application of milling techniques—these including precisely controlled "extraction rates"—the mill produces *standardized* types and grades of flour. These types and grades are the basis on which the flour is sold and used. The flour mill may advertise its products in trade magazines and these media, by conveying information on matters such as where and from whom the flour may be purchased, and the prices and the grades available, perform a facilitating function of providing *market information*.

Following the actual milling process, the flour is packaged in barrels, cotton bags (in earlier days these had a salvage value to the consumer and at the same time were a highly successful promotional device), paper bags, or other containers in various quantities, types, and grades. Some of these packages are designed for use in bakery operations, while others will appear on retail store shelves. Flour mills normally maintain a stock of their products and, to this extent, they are again involved in performing a *storing* function.

Most flour mills sell directly to the larger bakeries but in some instances they may sell first through a broker to a food wholesaler. In any event, there are further requirements in transportation and some in storage before the flour enters into the bread-making process.

In the bakery, flour is combined with a large list of other ingredients—eggs, yeast, milk powder, water, etc. It is *processed* by intricate mixing, dough-rising and baking operations to emerge, perhaps, as a 16-ounce loaf of bread. Each loaf is *standardized* as to weight, colour, texture, and appearance. It then may be sliced and *packaged* in a colourful wrapper. Very often it carries a brand name and, more recently, the staff of life is being identified with movie and television glamour.

Bread may then be *transported* by a delivery salesman to the consumer's home or it may be *transported* to a retail store. At the store, the bread is sold and may be *transported* along with other groceries by store delivery to the consumer, the wheat in this loaf ending perhaps a two-thousand-mile journey.

2. The Marketing of Poultry

Some changes in food marketing can be attributed to the dynamic nature of agriculture itself, and particularly to the impact of technological advances in farm production. Almost every line of agricultural production—grains, fodder crops, meat animals, dairying, poultry meat, eggs, vegetables, fruits and others—has been subject to the force of advancing technology.[1] In certain lines of production and

[1] In the production and marketing of poultry meat, technological change has been particularly rapid and has had an effect on price spreads which we discuss in Part V.

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at certain times, market forces—in contrast to forces more closely related to the farm production effort itself—appear to be the dominating influences. But the situation is never static for long and the balance is shifting continually.

Prior to the rise of the broiler as the most important source of chicken meat, Canadian consumers bought mainly heavy chicken (over $4\frac{1}{2}$ pounds) and fowl, the latter a salvage poultry meat from the egg-producing enterprise. The heavy roasting chicken met the large family's Sunday-dinner needs, and the fowl was a source of meat supply for lower income families. Supplies of both heavy chicken and fowl tended to be somewhat erratic and seasonal, and both type and quality of product were highly variable.

The developments leading to the breakthrough in the technology of mass production, assembly and distribution of the broiler chicken represent years of research and experiment culminating in an explosive-like expansion of a whole new industry within agriculture. Starting in this case, first with the egg, came the mass hatching of chicks carried out as a large-scale factory-type operation. The farmer, now specializing only in the task of rearing these from the day-old-chick stage to a highly uniform, high quality, healthy bird of three to four pounds, accomplishes all this in a period of nine to eleven weeks. The broilers are turned out by a broiler-producing unit, three or four times a year, not in batches of tens or hundreds, but in thousands and tens of thousands of birds: a broilerhouse accommodating 50,000 birds at a time is not uncommon in the industry now. In a short span of years, the commercial marketing of broilers has increased from an almost negligible quantity in 1947 to over 125 million pounds in 1957, and in the latter year accounted for over 60% of the commercial marketing of all chicken and fowl.

The technical progress making this possible has been, in addition to the development of the mass chick hatchery, progress in poultry genetics leading to a selection of specialized types of birds for particular kinds of production (eggs or meat), progress in controlling the physical environment for brooding and housing (for example, the use of the electric heat lamp, control of temperature and moisture) and progress in control of disease (for example, use of medicinal cures and protective medicines in water and feed). Additional factors have been: the great increase in knowledge about feeds, and the application of this knowledge both in the production of feed and in its most economic use in the broiler operation; and the adoption of mechanical devices for watering and feeding the birds, which increases immensely the number of birds that can be cared for by one person. In bringing about these changes in farm production of poultry, those in the business of selling feed to farmers have been particularly aggressive. Along with others, they have entered into contracts with farmers for the large-scale production of broilers and have financed these operations to a considerable extent.

We have described briefly this introduction of technology at the farm end of the poultry industry. It has made possible the outflow from the production unit at regular intervals of tens of thousands of live birds ready for market. This mass of raw food material must find an outlet of similar proportions. The live birds cannot be held awaiting a buyer: they are fit and ready and even a 24-hour delay will result in additional costs if they have to be fed or, on the other hand, a loss in weight and quality if they are unduly delayed in the marketing process.

Hence we find in the marketing system the development of large-scale buyers of broiler chickens. These may represent processors or be directly connected with food retailers. In any event, the live broilers must move almost immediately into a factory-like operation where they go through a killing and plucking process (the latter a mechanical operation), an eviscerating and possibly cutting line, and finally through a packaging and labelling operation. This whole development represents the application of mechanization and techniques of relatively recent origin, making possible the transfer of the processing operation from the hands of the farmer, his wife and children to an off-farm separate entity under specialized management.

The web of relations within what we call the marketing system is so intricate that it is often impossible to establish any simple cause and effect relation or to put one's finger on the point at which the change was initiated. Indeed this is true of the developments in poultry marketing and in the broiler industry. Many factors have been involved in the outcome but the changes would hardly have occurred without the technical developments resulting from experimental research.

3. Functions and Structure: Their Relation to the Problem of Price Spreads

Markets and the Relations Between Them

Most food products, as they move from the farm to the consumer, pass through a series of markets in which they change hands at a price. In each market the activities of both buyers and sellers are involved.

A market is difficult to define. We can talk about the Canadian market for apples but at each stage between the primary producer and the consumer apples are bought and sold in many places in Canada. In this sense there are many different markets. These markets become related into a national market in so far as apples can be moved between local markets. At any time the wholesale price of apples may be different in particular local markets but the differences are limited by the possibility of sellers disposing of their apples to buyers in some market in which the price is higher.

Similarly, having reference to a crop year, we can speak of the market for apples but, at each stage between the producer and consumer, apples are sold daily or hourly. In this sense there are many markets within the crop year. These markets over time become related by the opportunity to hold apples from a time at which the price seems to be low to a later time when the seller expects he can get a higher price. This activity limits the possible differences in prices.

Again we can refer to a market for all apples, but many different varieties of apples are sold. There are, therefore, different markets for different apples. These markets too are related: the prices between the varieties cannot differ too greatly or buyers will shift from the high-priced to the low-priced variety.

When the farmer sells a steer, he receives a price for it; when the consumer buys beef, she also pays a price. The difference between the two prices is the total spread.[1] The price the farmer receives is arrived at in a market in which the farmer is the seller and some firm, or its representative, is the buyer. The price paid by the consumer is determined in the market in which the consumer buys

[1] This is subject to qualification to which we draw attention in the measurement of commodity price spreads in Part V.

from a firm which is the seller. If, as the material moves from the farm to the consumer, it is bought and sold several times, then several intermediate prices are established.

The firms which are engaged in the many markets for food products participate in the pricing process as buyers and later as sellers. These firms have traditionally been grouped into four categories: assemblers, processors, wholesalers and retailers. On the basis of this classification of firms, markets and prices would then be established at five levels.

In the case of beef, there may be a price paid to the farmer at the farm gate by a dealer who delivers the cattle to the packing plant. This is the farm price. The dealer receives payment from the processor at the packing plant. The basis for this payment is an assembled price. After processing, the packing plant sells beef to a wholesaler at a price which is the processed price. The wholesaler sells to a retailer at the wholesale price and the consumer buys from the retailer at the retail price. This illustrates the series of markets, prices and components of the total spread according to the conventional classification of marketing functionaries. The markets at different stages (farmer, assembler, processor, wholesale, retail) are also related. The relations are more complex than those which we have noted previously between markets in place and time and for varieties or grades of products.

It would be useful in relation to the Commission's problem if it were possible to break down the total spread (farm price to retail price) into its component spreads (assembler's, processor's, wholesale and retail). We could then determine how much of the general increase in spreads was associated with each level of the marketing system. Unfortunately, for reasons which we will make clear later, this is not possible, although in the commodity studies reported on in Part V we have attempted in some instances to make this analysis.

Marketing Functions

At each stage the difference between the price paid and the price received by a marketing firm—that is, the spread—is the price received by the firm for such functions or services as it performs. The traditional classification of marketing firms into assemblers, processors, wholesalers and retailers is related to certain typical functions. The assembler brings together the relatively small quantities produced by many farmers and delivers them to a plant which requires a large and continuous supply of material for efficient operation. The processor converts the material into a form more acceptable to the consumer. The wholesaler assembles the products of many processors and makes them available in the quantities and at the time required by the retailer. The retailer provides a convenient place from which many consumers can obtain the quantities they wish at the time they wish them. These are the main features of the distinction between assemblers, processors, wholesalers and retailers and, although changes are constantly occurring in the marketing system, the classification remains a realistic and useful one.

Associated, however, with the main activities of assemblers, processors, wholesalers and retailers, are many other more particular functions or services. They include transportation, storage, sorting and grading, packaging, advertising, financing, risk bearing and bringing buyers and sellers together. These particular

functions may be performed at any or all stages in the marketing system, although in varying proportions. The total complex of functions performed by firms at each stage has some relation to the spread; it is the price received by the marketing firm for performing these functions. The point we want to emphasize, however, is that the extent of particular functions performed at each stage may change or the distribution may shift over time. It is not always easy to identify these changes and shifts, but we can illustrate by reference to one change and to one shift which have occurred in recent years. There has been a change in that promotional activities have acquired an increasing weight in the marketing system.[1] As an example of shift, the functions typically performed by wholesalers have been increasingly taken on by organizations classified as retailers.[2] Changes and shifts of these kinds have their effect on the total spread and on the components of the spread. Increased packaging and advertising involve additional expenditures on the part of the firms concerned, although they may also serve to reduce expenditures of other kinds per unit of the product. The assumption by retailers of functions previously performed by wholesalers has the effect of increasing the retailer's spread. To the extent that this shift results in economies, it also leads to a reduction in the total spread.

Market Structure

In each market there are buyers and sellers. The structure of the market has to do with the relations between buyers, between sellers, and between buyers and sellers. This takes us into a consideration of types of competition and competitive behaviour.

There is a difference in structure between a market in which there are many *sellers* and a market in which there is only one seller, or even a few sellers. The significant difference is that where there are many sellers it is not easy to obtain concerted or uniform action among the group. Where many sellers are acting independently and without reference to the actions of one another, competition among the sellers takes one form. Where there is only one seller, competitive behaviour is impossible. Where sellers are few in number, it is easy to eliminate or to modify the form of competition which prevails when there are many sellers acting independently. The many sellers of a particular farm product in a given market can provide for concerted action through voluntary use of a selling agency or, with legal support, by a compulsory marketing board. In the latter case, it is possible for the one selling agency to differentiate between the buyers in particular local markets and to sell to them at different prices. This appears to be the practice of the Tree Fruits Marketing Board in British Columbia in the sale of apples.[3] In the case where there is a small number of private firms, elimination or modification of the form of competition which prevails when there are many sellers acting independently could be effected by agreement, but in Canada such agreements have been illegal and, therefore, not enforceable; or it could happen merely as a result of each of the few sellers being unwilling to act independently in some ways, for example, to reduce prices. In any case, the nature of competition among a small

[1] For a treatment of the extent of the increase in expenditures on food advertising, see Part IV.
[2] See the discussion of changes in food retailing in the following chapter.
[3] See Chapter 3 of this part for a consideration of marketing boards.

group of sellers differs in form from the competition among many sellers acting independently. Pricing on a basis similar to that of the Tree Fruits Marketing Board appears to be the policy of sugar beet processors in the disposal of their product in Western Canada.[1] In other instances, individual sellers endeavour to distinguish the product they are selling from the product being sold by their competitors. For example, the number of firms producing and selling prepared breakfast foods is small. These firms change their product or the package in which it is presented so as to maintain its separate identity; promotional effort is directed largely to the same end. All these conditions have their effect on the determination of prices in the market.

There is, similarly, a difference in structure between a market in which there are many *buyers* and one in which there is only a single buyer or a small number of buyers. Where there are many buyers, they are likely to be acting independently of one another. Where there is only one buyer, the firm is not influenced by the possibility of having to adjust itself to the actions of other buyers. Where the number of buyers is small, the kind of competition occurring among many buyers may be absent, either as a result of agreement (which is illegal) or simply because no one buyer is willing to induce action by other buyers. Competition then takes other forms, such as special arrangements with respect to matters other than price.

There is a difference in structure between a market in which *buyers and sellers* are unrelated and one in which buyers and sellers or some buyers and some sellers are related, i.e., are not acting independently. Relations between buyers and sellers may be established in a number of ways. In some instances, a relationship is established through corporate organization; the price paid by a company which has a corporate link with the selling firm is not the result of a transaction conducted "at arm's length". The relation referred to here is evident between firms engaged in flour milling and in the baking industry. In other instances the link between buyer and seller may be through the directorate of companies. Thus, we find interlocking directorships between food processing firms, corporate chain stores, and other firms in or servicing the food industries. Contracts of various kinds also represent relations between buyers and sellers which affect the structure of the market and have a bearing on price determination. It has been brought to our attention that sugar beet processors in the Prairie Provinces have a form of contract with their growers which enables the grower to participate in changes in the price of sugar. The growth of vertical integration brings the producer of poultry and the buyers into a relationship which can affect the prices paid and received. Other forms of contract can be found at other stages of the marketing system. Later in our report we comment on the complex arrangements entered into between the retail chain buyers and their suppliers.[2]

We make these comments and offer these illustrations at this point, not with the purpose of passing judgment on the effects on prices, but merely to emphasize that the structure of the market is a complex phenomenon which has a significant influence on prices along the marketing system and, therefore, on price spreads for food products.

[1] See *Report Concerning the Sugar Industry in Western Canada and a Proposed Merger of Sugar Companies,* Canada Department of Justice, Ottawa, 1957.

[2] In the following chapters of this part, we discuss advertising allowances granted by processors to chain food store organizations.

Difficulties Encountered in Measuring Intermediate Prices and Spreads

We mentioned earlier the insuperable difficulties involved in any attempt to break down the total spread (farm price to retail price) into its component spreads (assembler's, processor's, wholesale and retail). Later in this part we use data drawn from the Census of Distribution which classifies marketing firms in the traditional way, and we have chosen to use this classification in our discussion of changes in food marketing. It is necessary, therefore, to call attention to the limitations imposed by the data and to the difficulties in observing changes in functions or structure in the food marketing system.

First, the data drawn from the Census are built up from information on "establishments" (individual places of business) which are units within business firms: in discussing functions and structure we have reference to firms. Business establishments and firms do not fall into neat categories in terms of the functions of food marketing. Most firms do not specialize in the handling of food products only, as is noticeable in the case of manufacturers classified as food processors who sometimes handle several quite separate farm products. In many instances by-products result from the processing of some or all of the farm products, and frequently the processor combines with the processing of farm products the manufacture of physically unrelated non-farm, non-food products. All these activities are carried out by the same firm: the functions or services are intricately mixed up together. The processor's spread for any one of the farm products or for all of them may be considerably influenced by his success in combining all the enterprises into one integrated operation. Some firms in the meat packing industry engage in such integrated operations.

Another difficulty we may notice is that not all farm products pass through the hands of the several functionaries as they move towards the consumer. Fresh eggs, potatoes and apples are not handled by firms normally classified as processors or are bought and sold by processors only incidentally to their main business. On the other hand, cereals and most livestock products are subject to change in form before reaching the consumer. Of course, this is also true of powdered eggs, potato chips and apple juice. Thus there is no processor's spread for fresh apples although there is one for apple juice. Further, if the farmer by-passes the market in which assemblers are buyers and sells directly to the retailer, the price he actually receives is not the farm price, but rather a price equivalent to the wholesaler's price.

As we have said, there is no clear-cut distinction between firms in terms of the functions they perform. Some firms classified as retailers are performing functions normally associated with wholesaling, for example, storing and warehousing. Some wholesale firms are involved in what are normally considered retail functions, such as providing display material to retail stores. Many processors buy some of their materials directly from farmers and to this extent engage in the functions of assembling. Consequently, the prices paid in particular transactions at any stage in the marketing system may be different because they represent payment for different services.

We have overlooked still another difficulty in measuring or interpreting the spread when we refer, for example, to the processor's spread as representing the revenue going to the processor for the services performed by him. In many cases

a large part of the revenue going to the processor is paid out by him for services provided by others. He may have little or no control over the price he pays for these services. There is, therefore, some error in referring to the difference between the processor's price and the assembler's price as revenue going to the processor for *his* services or functions. Elsewhere we refer to the transportation of food products by the railways and trucking firms. Food marketing firms pay for this service, but the railroads and trucking firms handle many products other than foods and the rates charged for transporting foods are not determined independently of the other business done by the transportation agencies.

CHAPTER 2.

FOOD RETAILING

1. Changes in Food Retailing

Our main source of information on the structure of food retailing in Canada is the 1951 Census of Distribution. For more recent years our information has had to be drawn from a variety of sources, including briefs presented at the hearings and the replies to the questionnaires distributed by the Commission. We begin by describing the structure of food retailing in 1951, with some reference to trends leading up to this year. We then refer to more recent trends.

Developments to 1951

The 1951 Census of Distribution reported that the number of food stores (retail outlets) increased from 37 thousand in 1941 to 40 thousand in 1951. In 1951 the main categories of retail food stores were grocery stores without fresh meat, combination stores (grocery stores with fresh meat), meat markets, fruit and vegetable stores, and bakery product stores. These five categories were responsible for 99% of total retail food sales and represented 96% of all retail food outlets. Although the number of grocery stores without fresh meat increased slightly from 1941 to 1951, the main increase was in combination stores. All other categories declined in number.

Throughout our report we will have occasion to distinguish between three types of retail food stores: corporate chains, voluntary chains and unattached independent stores. The 1951 Census of Distribution defines a retail chain as an "organization operating four or more retail stores in similar or related kinds of business under the same ownership". In most cases, organizations with multiple ownership of four or more retail stores are incorporated companies. In this report, therefore, a corporate chain is one which conforms to the definition of a retail chain in the Census of Distribution. This definition excludes retail stores which are independently owned but which are associated together in voluntary chains usually sponsored by wholesalers. Each of the large voluntary chains in Canada has a national headquarters through which franchises are granted to wholesalers, who in turn service retailers who operate under a common store name. The remaining type of retail store—the unattached, independent store—is separately owned and is serviced by wholesalers of its choice.

We shall also have occasion to refer to "supermarkets". The supermarket is a large-scale, multiple-produce store, operated on the self-service principle. It is frequently located in or close to the residential suburbs, with parking facilities adjacent to the store. In terms of the classification of the Census of Distribution, this is a large-scale combination food store.

The *corporate food chains* have existed in Canada for many years. They increased their share of the retail food business quite rapidly during the '20's, but their business grew little during the '30's, with their relative position remaining about the same throughout this latter decade.

During the war years, corporate chain stores failed to maintain their share of total sales. Their per cent declined from 31% in 1939 to 24% in 1946. Following the war, however, sales of corporate chains began to increase relatively rapidly, and by 1951 represented 32% of total sales of grocery and combination stores. In this year the corporate chains operated (in addition to some other categories of stores) 337 grocery stores and 866 combination stores for a total of 1,203 retail food outlets.

Voluntary food chains had gone through a period of rapid expansion in the '20's and early '30's, but by 1951 their share of the food business had declined to a small proportion (6%) of the sales of grocery stores and 4% of the sales of combination stores. Of the total of grocery stores (22,239) in 1951, 585 were listed by the Census as being members of voluntary chains or buying associations. For combination stores the number was 615, making a total of 1,200.

Between 1941 and 1951 there was an increase in the number of combination food stores and a decline in the number of specialized food stores. The average sales of combination stores in 1951 were four times as great as the average for the remaining food stores. Consequently, the shift to combination stores between 1941 and 1951 was accompanied by an increase in the size of retail food outlets. In 1951 there were 472 combination food stores with sales of $500,000 or over. There were also 21 grocery stores in this category of sales, making a total of 493. Of this total, more than 400 were operated by corporate chains.

It is clear, therefore, that, although in 1951 corporate chains and voluntary chains had about the same number of outlets, the volume of sales of the corporate chains was very greatly in excess of that of the voluntary chains because of the much larger stores operated.

In 1951, five corporate chains—Dominion Stores, Loblaw Groceterias, Canada Safeway, A & P Food Stores, and Steinberg's—accounted for 88% of the sales of all corporate food chains. Other corporate chains in Canada in that year included Sobeys Stores (operating mainly in Nova Scotia), Thrift Stores (Montreal), Dionne Ltd. (Montreal), Carroll's Ltd. (Ontario), Shop Easy Stores Ltd. (a subsidiary of Western Grocers, a food wholesaling firm in the Prairie Provinces), O. K. Economy Stores Ltd. (Saskatchewan), Jenkins Groceterias Ltd. (Alberta), Overwaitea Ltd. (British Columbia), and Super Valu Stores Ltd. (a subsidiary of Kelly-Douglas, a British Columbia wholesaler).

By 1951, grocery stores (other than those selling beer) obtained about 16% of their receipts from the sale of non-food products, including candy and confectionery, tobacco, household supplies, paper products, drugs and other commodities. The corresponding proportion for combination stores (other than those selling beer) was about 10%. Beer and wine alone represented 28% of the sales of grocery stores handling these items, and 13% of sales of combination stores.

To summarize the situation at 1951: the corporate chains, mainly five large organizations, were responsible for almost one-third of the total food sales. After recovering from the restrictions of the war period and apparently anticipating the postwar expansion of demand, the corporate chains were beginning to expand their operations relatively rapidly by the construction of new large outlets (supermarkets). The voluntary chains were well established, but were still servicing retail stores of relatively small size. By 1951 the corporate chains had extended the range of commodities handled, and had increased the variety of non-foods.

The smaller, unattached stores, many of which were handling a rather limited line of food products, were declining in number and in the proportion of total food sales made by them. The elimination of stores resulted from both the increase in efficient size of store and also from the competition of the chains. The decline in the small specialized store, and the relative growth of the combination store were evidence that the trend to one-stop shopping was under way.

Developments since 1951

a) Corporate Chain Stores

We turn now to refer to more recent developments. The expansion of the chain organizations has been relatively rapid during the '50's. From 1951 to 1958, the proportion of the total business of grocery and combination food stores done by corporate chain stores increased from 32% to 44%[1] (Chart 9). The five largest corporate chains increased their retail outlets from 622 in 1949 to 909 in 1957. Their share of the total sales of all corporate chains remained at about 88% until 1957 but has increased somewhat since then.

During these years each of the major chains expanded rapidly. While some of this expansion has been a result of the acquisition of smaller chains, most of the expansion has been the result of development of new facilities. In the following paragraphs we deal with the nature of the expansion of the major chains; in doing so we refer briefly to the main inter-corporate relationships.

Dominion Stores has expanded its own facilities, closing numerous small stores and opening supermarkets, and by 1959 was well into an expansion program in Western Canada. This firm acquired Thrift Stores (Montreal) in 1955 and Acadia Stores (Nova Scotia) in 1956 and now operates stores across Canada. A large block of the common stock of Dominion Stores is held by Argus Corporation, which has other food interests as well.

Loblaws has also expanded rapidly, with an extension of operations in Ontario and a recent expansion into Western Canada. In 1958, this firm entered into an agreement with O. K. Economy Stores (a chain with 40 stores in Saskatchewan). Loblaws also has large interests in chain food stores in the United States. This firm is controlled by George Weston Ltd. George Weston Ltd. also owns Western Bakeries, Weston Biscuit Co., McCormick's, Western Grocers and other firms associated with the marketing of food products.

The Steinberg chain, having done business in Montreal since the early '30's, has expanded at a rapid rate in the Province of Quebec, particularly in Montreal, and in recent years has extended into New Brunswick and Ontario. In 1959 this firm purchased 38 Grand Union stores in Ontario, and Ottawa Fruit Supply, a wholesaling firm now servicing Clover Farm Stores.

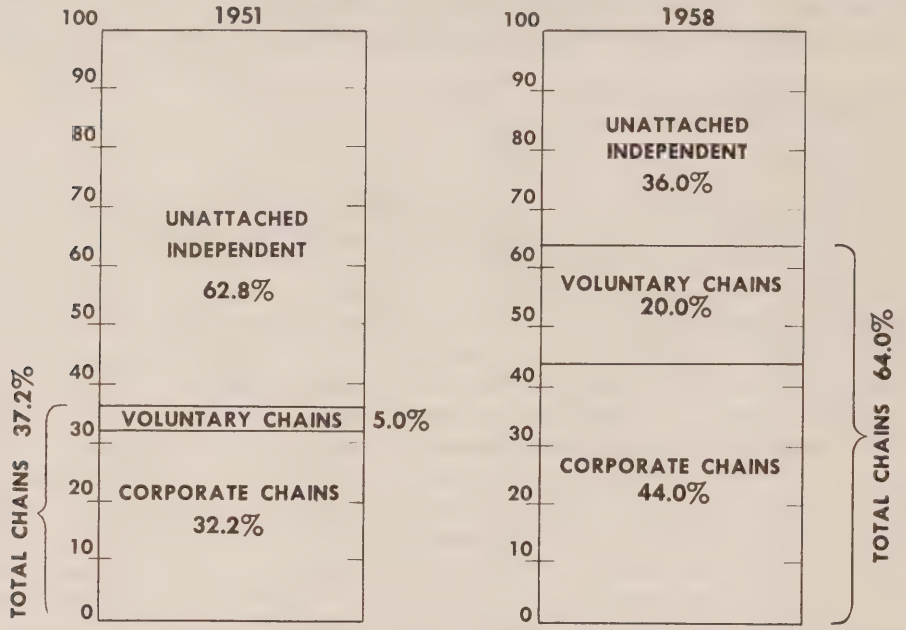
Two large United States based firms have also had extensive operations in Canada, conducted through their Canadian subsidiaries, Canada Safeway and A & P Food Stores. While they have expanded their business in recent years,

[1] The proportion varies across Canada, ranging from a low of 22% in the Atlantic Provinces to 59% in Ontario. The proportion of the business done by corporate chains in major urban areas is higher than that indicated by the provincial averages.

CHART 9

GROWTH OF FOOD CHAIN ORGANIZATIONS, 1951 TO 1958.

(PER CENT OF RETAIL MARKET)



SOURCE: The proportions are for grocery and combination food stores and were obtained from D.B.S. reports on Retail Trade except for voluntary chain proportions. For these, the 1951 estimate was obtained from data in the Census of Distribution and the 1958 estimate was obtained from Canadian Grocer.

the rate of expansion has been at a less rapid rate than in the case of the three previously mentioned firms. Canada Safeway operates stores in the Prairie Provinces, British Columbia, and at the Lakehead in Ontario. A & P now operates stores in Ontario, Quebec and Manitoba.

All of these retail chain store organizations now perform most of their own wholesaling, although in its recent expansion into Western Canada Loblaws' stores are being serviced by the wholesale facilities of Western Grocers. Most of these firms do relatively little of their own processing, although Canada Safeway has a fruit and vegetable cannery, bakery and other processing facilities. Steinberg's has added some processing to its operations, including its own bakery.

As has been indicated, four of the remaining group of smaller corporate chains have become linked with the larger ones during recent years. Other corporate chains which were in existence previous to 1951 continued to grow, but, as has been noted, all of these smaller chains together accounted for only 12% of the sales of all chain food stores through the period up to 1957.

b) Voluntary Chains

The increase in the proportion of the retail business handled by voluntary chains during this period was even greater than for corporate chains. Red and White stores have been operated as a voluntary group for many years. The other two main voluntary chains are Independent Grocers' Alliance, which has operated in Canada since 1951, and Clover Farm Stores, which entered the Canadian market in 1955.

From our questionnaire returns, it appears that by 1958 the numbers of wholesalers and retailers in these three voluntary chains were as follows:[1] Red and White, seven wholesalers servicing 995 stores; I.G.A., nine wholesalers servicing 656 stores; and Clover Farm, five wholesalers servicing 299 stores.

In addition, some of these same wholesalers service groups of smaller stores under a different store name. For example, the Lucky Dollar stores are operated under a franchise from the Canadian headquarters of Red and White stores and are serviced by the same wholesalers that service Red and White stores. (In 1958 there were 482 Lucky Dollar stores.)

In addition to these country-wide voluntary chains, there are numerous local groups of retail stores under a common store name, with the entire sponsorship often being handled by the individual wholesaler who services them. Examples are: Superior and Carload Food Markets in Ontario, sponsored by York Trading, and Tomboy Stores in the Prairie Provinces, sponsored by Western Grocers (George Weston Ltd.). Maritime Merchants Alliance in the Maritime Provinces links retailers with several wholesalers. Retailers themselves have also organized voluntary chains. Examples are: Les Epiciers Unis in Quebec, Solo Stores in Manitoba, and Associated Grocers in Alberta, organized by retailers.

In 1951, there were 1,200 grocery and combination food stores operating under these types of arrangement. In addition, there were 14 meat markets and 520 general stores, making a total of 1,734. (Some of the general stores were not food stores but they are included in order to allow comparison with the data available for 1958.) In 1958, it is estimated that there were 4,200 stores in voluntary food chains and that they were handling 20% of the retail food business in Canada.[2] (Chart 9).

c) Unattached Independent Stores

With 44% of the retail food business conducted by corporate chains and about 20% conducted by voluntary chains in 1958, about one-third of the total was done by unattached independent stores. Most of these, as well as those in voluntary chains, are operated by individual proprietors. The participation of co-operatives in the retail food business amounted only to about 2% of retail food sales, and does not seem to have changed appreciably in the last 10 years.

[1] The July 18, 1959 *Canadian Grocer* indicates the following numbers: Red and White (7 wholesalers and 941 stores); I.G.A. (9 and 692); Clover Farm (9 and 261).

[2] The source of this estimate is the July 19, 1958 issue of *Canadian Grocer.*

d) The Supermarket

The increasing importance of the supermarket is evidenced by the continuing shift to the combination food store and by the increasing size of store. The shift to the combination food store was taking place previous to 1951; we have noted that between 1941 and 1951 there was a decline in the number of food outlets selling a narrow range of products, and an increase in the number handling a full range of food items. These combination food stores were also larger than the others.

Between 1951 and 1957, the increase in size of store continued. The data for corporate chains indicate that the number of stores with sales of $500 thousand per annum or over increased from 446 in 1951 to 791 in 1957. The number with sales between $300 thousand and $500 thousand also increased, while the number with sales of under $300 thousand decreased from 625 to 351.

A further indication of the growth that has taken place in size of store can be obtained by considering data on the change in store area and in volume of sales per store for stores operated by the five major chains. Between 1949 and 1957, the average area per store more than doubled, increasing from 4,400 to 9,600 square feet. New stores currently being built are often as large as 20,000 square feet. The average sales per store in 1957 dollars increased from $674,000 to $1,193,000 during the period.

During the '50's, with the rapid development of supermarket outlets, there has been an increasing proportion of food-store sales accounted for by non-food items. Because of this, several of the chain store firms have instituted non-food departments in their organizations.

We have referred to the increasing proportion of the retail food business done by corporate chains. These firms are thought of as retail organizations. They also perform the functions of the wholesaler, however, including the operation of warehouses from which they service their retail stores. Thus, the relative growth of the corporate chains has involved a shift of functions from the wholesaler to the retailer.[1] Each of the corporate chains has expanded its wholesaling facilities as its retail business has been expanded. For example, between 1949 and 1957 Canada Safeway extended its warehouse space from three-quarters of a million square feet to one and one-quarter million square feet. At the time of the Commission hearings in Montreal, the Commissioners went through the Dominion Stores' and Steinberg's warehouses in that city. Both of these warehouses had been added during the postwar period and represented large expansions over the previously operated facilities. In addition to expanding their own facilities, the retail stores operated by corporate chains have been serviced by existing wholesale facilities as they moved into new areas. In some cases these facilities have been under the control of the corporation or the parent corporation as, for example, the servicing of Loblaws' stores in Western Canada by Western Grocers, and the servicing of Steinberg's stores in the Ottawa-Hull area by Ottawa Fruit Supply.

[1] At the same time, the voluntary chains have also grown rapidly. To the extent that wholesalers servicing retail stores within voluntary chains participate more in the operations of these retail stores than other wholesalers do for unattached independents, there is a shift in functions from the retailer to the wholesaler.

e) Summary

During the '50's corporate chains have rapidly increased their share of the total market and the size of their retail outlets. The supermarket located at a convenient site or associated with the shopping centre has become characteristic of the corporate chain. The voluntary groups have also flourished during this period and have, apparently, competed successfully with their corporate rivals. The pressure on the independent, unattached, food store has continued. Some of the larger of these have entered into voluntary chains; while the others have not shared in a greatly expanding national market, there has not been a sharp decline in the absolute volume of their business. We have indicated the rapid growth in the proportion of the retail food business done by corporate and voluntary chains.[1] This change in structure has resulted in increased concentration of buying power and has repercussions throughout the marketing of food products. Five large corporate chains and three country-wide voluntary chains now conduct over half of the retail food business. This fact becomes even more significant in view of the concentration of chain store operation in major urban areas. The growth of the chains has also resulted in shifts in the performance of functions because the corporate chain organizations have taken on functions formerly performed by the wholesaler and to some extent certain of the functions formerly performed by the processor.

2. Causes of Changes in Food Retailing

We have given some indication of the growth of the chain supermarket in recent years. Within the past 10 years the chain supermarket has become the dominant institution affecting the structure of the food marketing system in Canada. While the supermarket is not necessarily a feature of the food chain organization, and may be adopted by independent store operators, almost the entire development of supermarkets in recent years has taken place within the chain organization, both corporate and voluntary.

To what circumstances can we attribute the phenomenal growth of the corporate and voluntary chain supermarket? In a general way the expansion of this type of retail organization can be attributed to the growth and changing character of the aggregate demand for food and the services which go along with it. The corporate chains clearly anticipated this postwar development and set the pace. The reorganization of independent stores into voluntary chains was accelerated by the necessity of meeting the strong competition of the corporate chains. Many of the independents had to enter these arrangements in order to survive; the continued growth of the voluntary chains employing the supermarket techniques is evidence of the effectiveness of both the chain organization and the techniques of the supermarket. However, the recent developments in the retail end of food marketing are not merely an illustration of effective adaptation to changes in demands. They have been facilitated by successful application

[1] Similar increases have been occurring in other countries. In the United States, it is estimated that corporate chains increased their proportion of sales from 37% to 39% between 1947 and 1958 and voluntary chains from 29% to 45% (*Progressive Grocer*, April, 1959). The development of voluntary chains has also been rapid in the food retailing field in the United Kingdom and West Germany (*The Economist*, December 27, 1958, and March 7, 1959).

by the chain stores of techniques for influencing demand, by the efficiency of operation of the chain organization, and by the availability of capital to expand chain supermarket operations.

Adaptation to Changing Demand

The supermarket food store represents an adaptation both in the methods used and in the physical environment of the store itself to changed conditions in the Canadian consumer demand for food. But the food supermarket adaptation has been only a part of a general redesigning process in the whole field of retail marketing. The changing conditions of consumer demand, and the changes they bring about in the retail marketing structure, comprise a series of interrelated developments, varied in their effects upon the different types of retail and service establishments and organizations. Those conditions having the greatest influence in retail food marketing include (a) the growth and increasing urbanization of the Canadian population, (b) the increase in availability of means of personal transportation (the automobile) making for new designs and patterns in urban living, and (c) substantial gains in real incomes per person and per family. Each of these developments and others have given rise to marked changes in the personal and family social habits and scale of living.

Some of the developments referred to are not of recent origin but represent continuation of long-term trends and tendencies. The all-compelling forces operative during wartime urgency speeded up some of the changes which, under pressure of normal economic and social forces, might have taken place much more gradually. For example, the greatly increased requirements for a wartime labour force brought large numbers of women into a wide range of occupations and thus increased incomes per family. Again, the growth of industries for war production, with many new industrial plants located on the outskirts of cities and towns, in part set the way to new patterns in urban growth and suburban living. Readjustment from wartime conditions came quickly, and in the first full year after the war, 1946, substantial increases occurred in investment in social and industrial capital. The pace of growth, expansion and change in population and in economic activity quickened and, except for two relatively short periods of hesitation, continued at the quickened rate through 1957.

a) Growth and Increasing Urbanization of the Canadian Population

Three aspects of the population change have been impelling factors in the changes in all retail merchandising, but more particularly in food retailing. These have been absolute population growth, the speeding up of the long-run transition from a farm and rural Canada to an urban Canada, and the accompanying emergence of the "metropolitan area".

From 12.1 million in 1945, the total population increased by nearly 1.9 million people to just over 14 million in 1951.[1] We know that the intake of food, as measured in quantity per person, has a high degree of year-to-year stability.

[1] Including Newfoundland, which became part of Canada in 1949. (The population of Newfoundland in 1951 was 361,000.)

Thus, this increase in population would require nearly a million and a half additional tons of food by weight at retail per year. By June 1, 1957, the population had grown to 16.6 million, a further increase of nearly 2.6 million people, with an intake of an additional 2.0 million tons of food a year. This illustrates the importance of population increase as a major contributing factor to increases in aggregate demand for food. The economic significance of this point is brought home by a further calculation. Assuming the maintenance of family food buying power, which in effect held during the period 1951 to 1957, the aggregate increase in food consumption due to population increase would require the addition of about 500 supermarkets each doing an annual food retail business volume of two million dollars a year.

Looking at the geographic distribution of supermarket development, we find that it has not proceeded evenly either regionally across Canada, or within regions, provinces or subdivisions of provinces. We turn, therefore, to look at changes occurring in distribution of population. Here we find substantial shifts. Growth in population and increases in population density have been most pronounced in the central provinces of Ontario and Quebec and in the province of British Columbia. Within these provinces the really substantial gains have been restricted to limited areas: the western and southwestern parts of Quebec; central and southwestern Ontario; and the Fraser Valley and southern Vancouver Island portions of British Columbia.

Within all regions, the metropolitan areas have grown rapidly in population. Between 1941 and 1951, the 14 metropolitan areas[1] increased in population by nearly 28%, while the total population increase[2] was under 19%. Metropolitan growth, with the consequent concentration of population in metropolitan areas, continued through the period 1951 to 1956 with an increase of 19% for metropolitan areas as against a total population rise of 15%. Along with increases in total population in metropolitan centres, there have been almost corresponding gains for the total population in other major urban areas. Meanwhile, the rural population in absolute numbers has remained nearly constant. Because the increase has been concentrated in urban areas, the rural population[3] declined relatively from 44% of the total to 37% between 1941 and 1951, and in 1956 it comprised about one-third of the total. The farm component of rural population has shown a sharp absolute and relative rate of decline.

The relation between the growth of cities and the evolution of food retailing can be illustrated from a study of the Toronto metropolitan area. The growth of population in the metropolitan area was accompanied by a spreading out of population into the suburban areas. The expansion of services to the rapidly increasing number of consumers in these suburban areas was effected by the opening of new supermarkets by the corporate chains, many of which were located in shopping centres.

The population of Metropolitan Toronto rose from 0.9 million in 1941 to 1.1 million in 1951, to 1.4 million in 1956. Over the 15 years the increase was

1 Halifax, Saint John, Quebec, Montreal, Ottawa-Hull, Toronto, Hamilton, London, Windsor, Winnipeg, Calgary, Edmonton, Vancouver, Victoria.

2 Excluding Newfoundland, Yukon and Northwest Territories.

3 Rural population—all persons residing in towns and villages of less than 1,000 whether incorporated or not, and persons living on farms.

just over 50%, but the increase between 1951 and 1956 alone represented the addition of a city of the size of Ottawa. The rate of growth of population differed considerably, however, in the three main regions of the metropolitan area—the city proper, the inner suburbs and the outer suburbs. The city proper showed a slight increase in population between 1941 and 1951, but population declined in subsequent years to about the same number as in 1941. The population of the inner suburbs rose at a rapid rate between 1941 and 1951; the rate of increase declined after 1951, however. The most spectacular change took place in the outer suburbs which saw their population rise from 57,000 in 1941 to 196,000 in 1951, to 413,000 in 1956.

The shift of population into the suburbs was accompanied by a change in the number of occupied dwellings, the number of families per dwelling and the number of persons per household. In 1956, the city proper had some 10% fewer dwellings than in 1941, and the number of persons per household declined. The trend towards one-family dwellings with fewer persons per household was also evident in the inner suburbs, particularly between 1951 and 1956 when the number of occupied dwellings increased by 19%. In the outer suburbs the enormous increase in population was accompanied by an increase in family size and in the number of persons per dwelling. The number of occupied dwellings rose from 15,500 in 1941 to 51,600 in 1951 to 107,500 in 1956. The proportion of families with no children declined between 1951 and 1956, and, at less than 30%, was considerably lower than in the inner suburbs (42%) and in the city proper (44%).

Unfortunately, in analyzing the information on location and size of store, it is not possible to distinguish between stores associated in voluntary chains and the unattached, independent stores. It is, however, possible to separate corporate chain stores from the others. Further references in this section are to corporate chains only. Within the metropolitan area, the rate of increase in chain store sales has been greater in the suburbs than in the city proper, and much greater in the outer suburbs. The data available show that the increase in sales has been the result of the opening of new outlets of large size, frequently in shopping centres.

In the city proper the total number of chain food stores at the beginning of 1951 was 97, and at the end of 1957 was 93; total sales had increased by 35%, although sales in the 75 stores which remained open during the entire period rose only 11%. In the inner suburbs the picture was tilted slightly in the opposite direction: the 34 outlets at the beginning of 1951 had become 37 at the end of the period, and the sales in the 29 stores in continuous operation were up 8% as compared with a 52% increase in total chain store sales for this area. In the outer suburbs there were 14 stores in continuous operation during the period, only one of the 15 stores open at the beginning of 1951 having closed, but this group was only a quarter of the 56 outlets at the end of 1957. The increase in sales of the existing stores was higher, 21%, than the increase for existing stores in other areas, but the increase in total sales by 1957 was six times the value in 1951. Concomitant with this increase in total sales has been the growth of sales per store. Annual sales per store in 1951 averaged $1.1 million, and $1.8 million in 1957. Average sales were higher for the new stores than for those in continuous operation, and for the outer suburbs were much higher than in the inner suburbs or the city proper. Thus it is evident that the typical food store in Toronto

during the period 1951 to 1957 had increased sales, and that total food sales increased particularly by the addition of large chain outlets in the outer suburbs.

Information on shopping centres supports the evidence that the typical new food store in Toronto has been the corporate chain supermarket. Out of 23 shopping centres opened in the metropolitan area from 1951 to 1957, 21 were in the outer suburbs, one in Leaside, and one in the city proper. By 1957 there were 27 food stores located in the shopping centres and all but four of them were chain store outlets. Of the four independent stores, three are known to be members of one of the voluntary chain groups. There were 56 chain food stores in the outer suburbs in 1957; of these, 20 were located in shopping centres, and their average sales of $2.3 million a year are higher than the average of $1.8 million for the whole group.

We have used an example of one metropolitan area to illustrate the responsive increase in supermarket outlets to the burst of new population and the mushroom growth of suburban residential areas within a present-day metropolitan area—an increase both in numbers and in the per cent captured of the rising volume of food business. Up to this point we have related supermarket development to the volume increase in food requirements resulting from population increases. This is only part of the story, however, and neglects many, perhaps equally important, associated and contributing influences. Among these, one stands in bold and shining relief: the family automobile.

b) The Automobile

The strong propensity to urban living, (which, incidentally, is not a characteristic by any means unique to Canada) in the earlier years gave rise to two directions in the expansion of cities. As a result of the building of tenements and apartments, there was a marked increase in density of population within the city proper. Even the larger cities were mainly compact, closely-knit communities held together by the limitations of available public transportation facilities.

Technically, the automobile in design and reliability of performance was well advanced before World War II, but its distribution by ownership then was limited considerably indeed. The economic and social forces which were to change public attitudes to the automobile from mainly a business or pleasure category to that of an article almost as necessary as the cookstove, were joined after the war. Through the dozen years since then, these forces have pressed inexorably on the social and business status of a rapidly increasing proportion of Canadians.

The number of automobiles registered just about doubled between 1945 and 1951, rising from 1.2 million to 2.1 million, and rising again to 3.4 million in 1957. The ratio of population to automobiles was cut in half over the 1945 to 1957 period, falling from 10.4 persons to 4.9 persons per automobile. In 1951, 42% of Canadian households had an automobile; by 1958, the proportion had increased to 63%.

At the same time as the increase in numbers, the diffusion of automobile ownership over an increasingly wide range of the population opened the road to a growth of major suburban residential districts beyond the historic "city limits". The cities spilled into arable farm lands, pastures and vacant fields and

the previously barely definable metropolitan areas became recognizable. "Suburbia" grew apace while the "city proper" stood still or languished. The new suburban home with its conveniences, a spacious lot and social elevation, became the objective alike for the dweller of the city proper and the country dweller moving into urban employment.

The acquisition of an automobile, along with a "ranch style" modernly equipped and furnished home, would have been impossible for the many in relation to the purchasing power of Canadian family income prior to World War II. But increases in productivity, bringing much greater individual earning power, and increases in the number of wage earners in the family, taken together contributed to a substantial development in family buying power.

With a car, a new urban or suburban home, young and growing children, and a five-day work week, the typical Canadian urban family represented an immediate, rapidly expanding and attractive market. This family had wants or was susceptible to being influenced in their wants and they could pay cash, or, alternatively, were good credit risks. The family shopping sortie was fitted into and became a part of the family social and living pattern. It might, for general shopping such as groceries and household supplies, be a special period set aside on a weekday evening or on a Saturday. It might be a regular visit to a store or a shopping centre on the way home from work. Whatever the arrangement, it was, in nearly all instances, tied in with the use of the family automobile. This required certain conveniences—a place to leave the car and easy access to a place for loading the results of the shopping into the car. Further, there were other things besides food needed for the household, such as drugs, hardware, and an increasing array of other items.

c) Increasing Real Income per Family and per Person

Between 1949 and 1958, there was an increase of about one-quarter in the real income per adult in the Canadian population: the average per adult in 1949 was $1,559 and in 1958, $1,940, expressed in 1957 dollars. This has resulted in the opening of a mass market for consumer goods of all kinds.[1]

The increases in the real incomes of consumers have resulted in increasing demands for the services associated with food products, for example, increases in the variety of items and availability of many products on a more continuous basis throughout the year. Many improvements in quality of food products, such as the increased freshness of many products and the increased trimming and curing of meats, have been made in response to consumer demands. The overall effect of increased incomes on the quantities of food products consumed has been negligible.

All of the foregoing aspects of consumer demand, as well as other matters of importance, have exerted a substantial influence in the development of the supermarket with its parking area and its convenient car-loading facilities. Today it is established as the central and dominant institution in shopping centre developments. It utilizes the services of advertising media and other devices of many kinds to attract and hold customers.

[1] In Part IV we comment on changes in spending patterns.

Skill in Techniques of Influencing Demand

The individual supermarket is the significant unit in the chain organization.[1] It is regarded as a convenient display area with a given amount of shelf space, and the total effort of the organization is directed towards maximizing the volume of business done by each unit.[2] A large part of the total strategy to this end precedes the establishment of each new unit: at this stage careful consideration is given to the selection of site, with an eye both to convenience to potential customers and to competition; to the size of store in relation to the customer potential; and to layout in terms of attractiveness and convenience to customers. All this, with the exception of activities which may be designed to exclude competition,[3] appears to be in the interests of consumers.

Once the investment has been made and the facilities provided, efforts continue to be directed towards maximum volume of business, both by inducing customers to come to the store and by encouraging them to buy when they are there. At this point the strategy involves a range of devices. The weight given to various elements is the organization's competitive weapon on which its relative success depends.

Price is only one factor in the strategy, and probably is given a lesser weight than some others. The Commission's inquiries indicate that, as between different supermarkets, whether operated by the same chain or not, there is little variation in the total cost of a basket of food products in any given area.[4] Firms check one another's prices, and, despite the best efforts to establish customers' loyalty, many consumers shop at different stores. There is, however, at any time in the same area a considerable variation in the prices of particular items. Pricing as part of the strategy is determined at headquarters. The local manager receives instructions on prices; little discretion is left to him.

The conclusion to be drawn from our study of prices in supermarket outlets is borne out by the information we have obtained on markups. While there are different levels of markups for particular classes of commodities, the normal level may be departed from at any time as part of the general strategy. The information the Commission obtained in reply to the questionnaire indicates this quite clearly, as can be seen in Chart 10. In this chart the markups are shown for selected commodities in chain store organizations in Toronto and Montreal.

Prices of particular commodities are determined, at any time, mainly with a view to drawing customers to the store. This is the purpose of the "special". Prices on specials may be reduced substantially in order to feature the items in the weekly advertisements, and planning of the specials to be offered at any time may be undertaken well ahead of the occasion.

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1 While we stress the use by chain organizations of techniques to influence demand, the unattached independent stores also engage in promotional activities, although to a lesser degree.

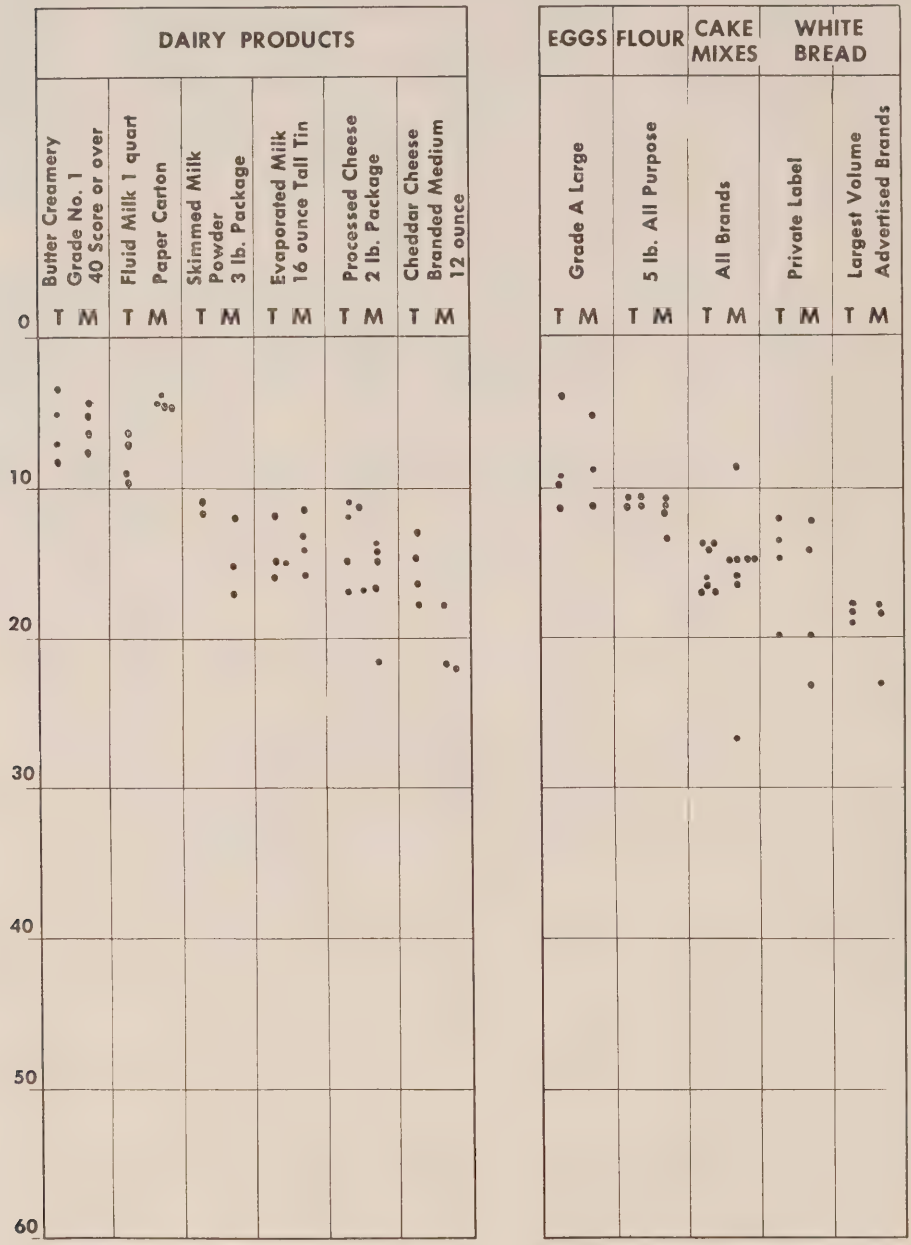
2 For example, one of the chain store organizations, in its reply to the Commission's questionnaire, stressed the role of store contests in "rejuvenating sick stores".

3 See p. 66 of this part on the acquisition of store sites.

4 See the report of the study of retail food prices in Toronto and Vancouver in Volume III of this report.

CHART 10

PER CENT MARKUPS OF SELLING PRICES, SELECTED FOOD PRODUCTS, FOOD CHAINS, WEEK OF AUGUST 11 TO 16, 1958



LEGEND: T = Toronto
M = Montreal

● = The level of markups for the specified product, in all the stores of a chain in the designated trading area.

CHART 10 (continued) - 2

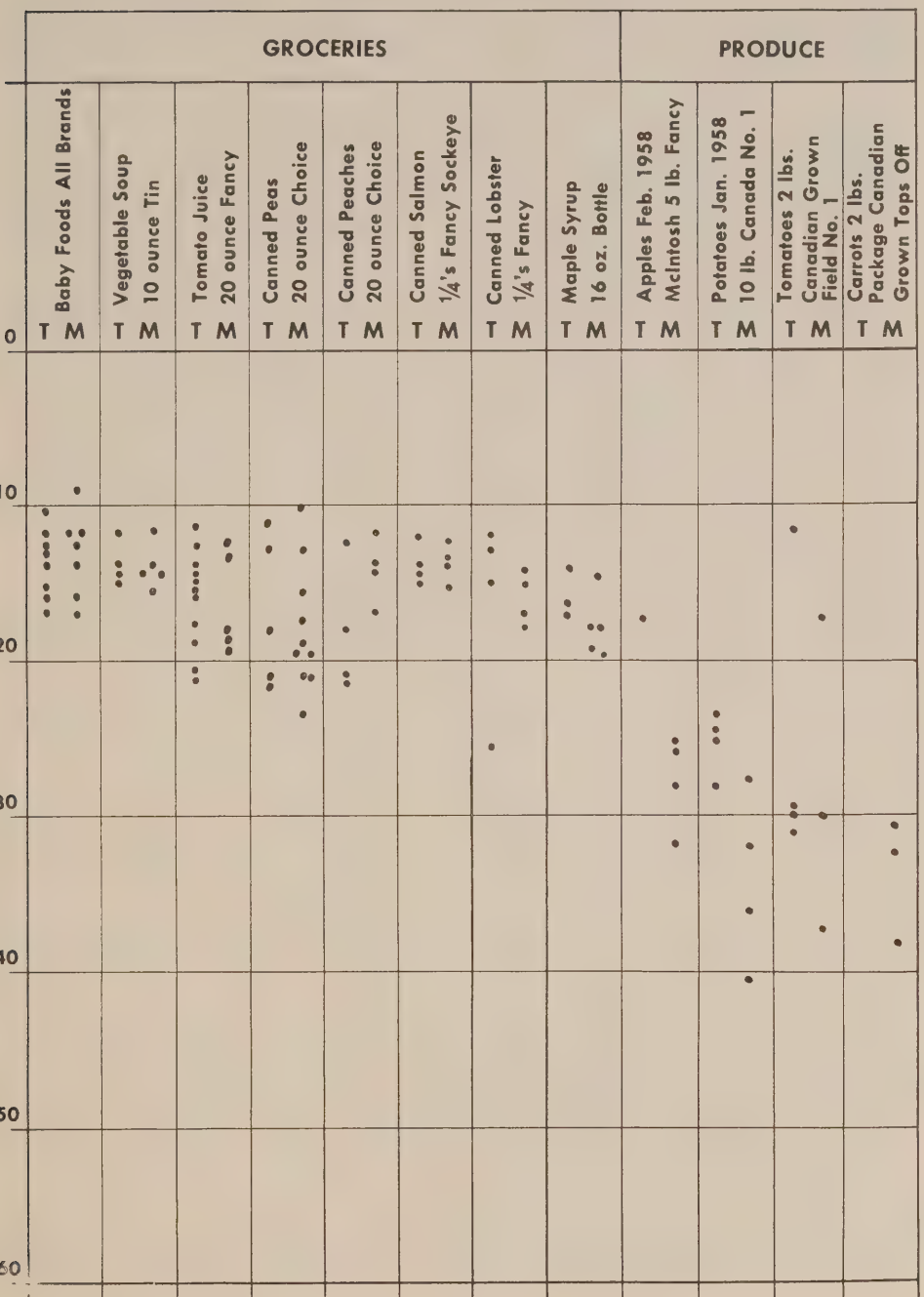


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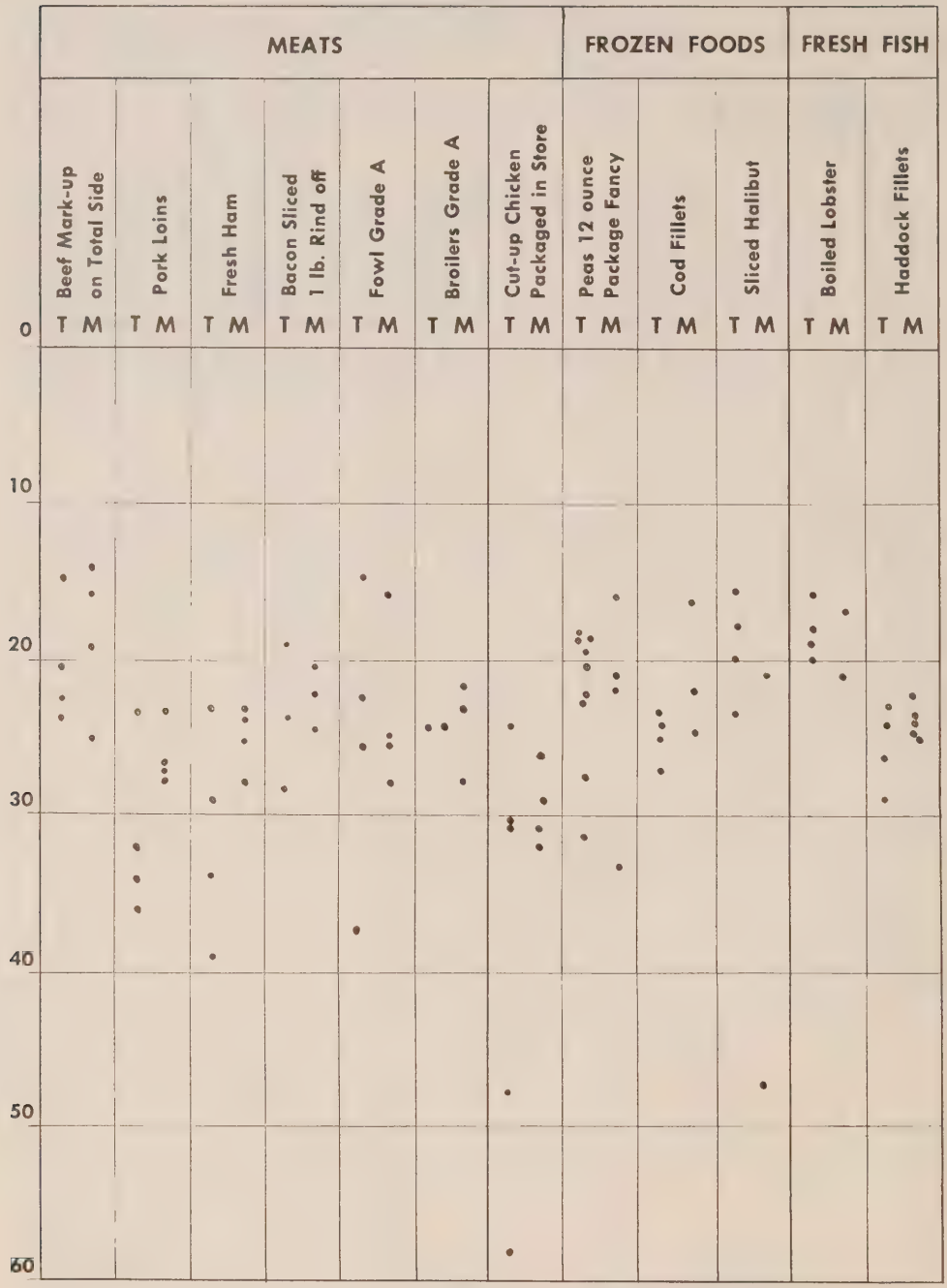
CHART 10 (continued) - 3



Items such as uncured meats and fresh fruits and vegetables, which are not sold under brand names, fill a special role in the expansion and maintenance of sales volume in the supermarket. For some of these items, entire merchandising programs have been developed. Highly skilled personnel negotiate the contracts for the merchandising programs with the objective of drawing in customers through special prices. In the submission of the Canadian Retail Federation, it was pointed out that "the chains were also able to develop specialists in buying and in management and to provide a close co-ordination of the wholesaling and retailing functions under one management".[1] The central procurement of products was also referred to by several of the chain store organizations in their replies to the Commission's questionnaire.

An important aspect of the merchandising programs is the emphasis on *quality* and "value" rather than price. Indeed the weekly advertisements of the chains stress quality. In order to back up their advertising efforts along this line, these organizations concentrate on selling products that the bulk of customers accept as being of high quality. In canned products they usually stress the "fancy" and "choice" grades; in beef, "red and blue brand"; in eggs, "A large"; and in fresh fruits and vegetables they pay particular attention to moving products through their warehousing facilities and retail outlets as rapidly as possible.

Another important element entering into merchandising strategy is the *rate of turnover* and value in terms of shelf space of particular commodities. The size and layout of the store being established, the volume of business and "gross margin" of the store depend upon the volume of business and gross margin for each unit of shelf space. The important relations are illustrated in the following table.

	A	B	C	D
Shelf space per package	12 sq. ins.	6 sq. ins.	6 sq. ins.	6 sq. ins.
Turnover per week	1,000 units	1,000 units	2,000 units	2,000 units
Buying price (at store)	$1.00	$1.00	$1.00	$1.00
Selling price (at store)	$1.25	$1.25	$1.12½	$1.06¼
Markup	25%	25%	12½%	6¼%
Margin/sq.foot/week	$20.83	$41.67	$41.67	$20.83

The operation of the supermarket is adjusted to the habit of one-stop, once-a-week food shopping. This meets the convenience of customers with automobiles, i.e., most customers in the areas in which supermarkets are located. A necessary condition of this type of shopping is that customers must be able to get all, or most of the food commodities they wish in the supermarket. As there is little shopping done on certain days of the week, however, the rate of turnover of goods on the shelf is limited. Consequently, supermarkets attempt in various ways to induce patronage at these slack times. The more often the buyer comes to the store, the larger her purchases over a period of time will be. This results from the tendency

[1] *Proceedings,* pp. 4547-8.

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to "impulse" buying, which is a recognized feature of customer behaviour in supermarkets. There are, however, certain commodities which consumers tend to buy more frequently than others. These staples occupy an important place in merchandising strategy, and may be priced so as to provide an incentive to patronize the store.

Our inquiries indicate that there has been a tendency for chain supermarkets to carry an increasing range of non-food items and that sales of non-foods represent an increasing proportion of total sales. The explanation of this tendency is probably to be found in the trend to one-stop shopping. The expanding content of non-foods in sales is offered as one of the factors increasing gross margins.

The objective of the supermarket's promotional strategy is to persuade consumers to shop at a particular supermarket. The strategy is aimed at obtaining and maintaining store traffic at a profitable and predictable sales volume. Consequently, supermarket promotion of a particular food commodity is not an end in itself; rather such promotion is but a tactical device to lead consumers into the store and is, therefore, a part of the overall strategy of gearing store traffic to the desired sales volume.

The chain store executive has many promotional techniques at his disposal; the most common techniques are advertising, premiums, trading stamps, contests, and displays within the store. Of the promotional expenses of the corporate chains for which we had information for 1957, newspaper advertising accounted for 37%, premiums and trading stamps 26%, contests 6%, displays within the store 6%, other types of advertising and other promotional expenses 25%. The executive decides on whether to employ some or all of these techniques over a given period of time. He decides on the relative importance of the chosen techniques in terms of budget allocation. In addition, he decides on the timing and sequence of introduction of the chosen promotional techniques for any given promotional campaign. There appears to be an almost infinite variety of promotional plans.

It is extremely difficult to evaluate the effectiveness of a promotional campaign, or of the components that make up the campaign. Consequently, the chain store executive experiments continuously. When he does evolve what appears to him to be a successful promotional scheme in terms of promotion objective and strategy, he can expect that his competitors will either imitate his scheme or strive for an even more effective one.

Another factor limiting the promotion executive is company policy concerning the use of certain promotion techniques. Firstly, company policy may allow the executive unfettered freedom and aggressiveness if he desires to employ a promotional device such as trading stamps. Secondly, company policy may be defensive in attitude, allowing the executive use of trading stamps only if immediate competitors adopt the technique and use it successfully. Thirdly, company policy may be against the use of the given technique at all times, notwithstanding competitor success.

Questionnaire returns from the corporate retail food chains reveal that in 1957 no two firms allocated the promotional budget in the same way.

We now turn to an examination of the promotional techniques that are most commonly employed by the Canadian retail food trade in general, and by the chain supermarket segment in particular.

a) Advertising

Advertising is the paid transmission of sponsored messages through media such as newspapers, radio, television, handbills and billboards. The content of chain store advertising is basically informative: the item is noted and its price is given. The greater the number of stores in the chain within the advertising medium area, the less is the cost of advertising per store. Consequently, the voluntary or corporate chain food store possesses a real economic advantage over its independent cousin. On the other hand, promotional discipline is required if the chain stores are to exploit the advantages of large-scale advertising; for example, all stores in the chain must carry the advertised products and must offer these products at the advertised price.

Since the bulk of supermarket shopping occurs during the weekend, the greatest volume of advertising takes place on Thursdays and Fridays. Weekend "specials" are highlighted. A meat product is often the special because it constitutes the heart of menu-planning for the majority of housewives. The aim of such advertising is to "pre-sell" the consumer on certain key food products in order to lead her into the store so that she may shop there for all her household's food needs.

Questionnaire returns indicate that advertising plays a dominant role in chain supermarket promotion. Seven of the 10 reporting corporate chains allocate over 50% of their promotional budget to advertising. Newspaper advertising appears to be the most popular promotional technique; the range of usage, however, is very wide—from 18% to 81% of total promotional expenditures were allocated to newspaper advertising during the last reported fiscal year of the 10 reporting chains. Only one chain viewed billboard advertising as an effective advertising medium; two other chains had more confidence in the effectiveness of handbill distribution. In terms of expenditures, radio advertising was more important than television advertising for all but two of the reporting chains.

While the objective of chain store advertising is to influence the consumer to shop at the store, the technique employed is to highlight certain commodities—usually well-known, branded food products—along with meats, produce and other "specials". The branded product may or may not be specially priced for the occasion. The promotional efforts of the food processor have already popularized the brand. Further popularity is exhibited if the product is advertised as being available in the given supermarket. Since chain store advertising of the product assists the processor with his promotional effort, the processor co-operates in advertising his brands. Co-operation may take various forms, from supplying printing plates and mats to paying part or all of the cost of the advertisement or commercial. Such payments to retailers, whether in the form of a special discount, a credit memorandum or cash settlement, are called "co-operative advertising allowances".[1]

b) Premiums and Trading Stamps

The objective of both premium plans and trading stamp plans is the same, viz., to attract and retain trade. Basically, a premium plan is the practice of

[1] We deal with advertising allowances as received by chain store organizations later in this chapter and, as paid by suppliers, in the following chapter.

allowing customers, as a reward for their patronage, to purchase specified articles at discount prices while the retailer is still reimbursed for out-of-pocket costs of the items. In contrast, a trading stamp plan rewards customers for their patronage by giving them specified articles without direct monetary compensation to the retailer.

The five most commonly used kinds of food store premium plans are listed below:

(1) The customer is offered a discount on the purchase of a premium being sold in the store. No food purchases are necessary.
(2) The customer is offered a discount on the purchase of a premium in the store if her food order is of a minimum size.
(3) The customer is offered a discount on the purchase of a premium if she submits her cash register receipts on goods purchased in the store. The cash required and the total receipts necessary vary with the value of the premium. Redemption may take place in the store or by mail order.
(4) The customer purchases premiums at a discount but on an instalment basis. Generally, she is eligible to purchase a "premium certificate" in ratio to the dollar amount of her order—usually a 1:10 ratio. After purchasing the required number of certificates, she then redeems them for the desired premium.
(5) The customer is given a rebate on the food order which may be credited to the purchase of subsequent food orders, or it may be credited to the purchase of a desired premium.

An examination of "trading stamp" plans by Canadian food stores reveals that the actual plans may be placed in one of two categories: (1) The traditional trading stamp plan is one in which retailers give gummed stamps to customers in some ratio to their purchases, usually one stamp for every ten cents of purchase. The stamps are accumulated by pasting them in books which typically hold 1,500 stamps. Customers then exchange their accumulated stamps in the store for merchandise that is usually listed and illustrated in a catalogue. The value of the merchandise selected determines the number of filled books to be redeemed.

The food retailer may purchase a trading stamp plan from a trading stamp company, or, if the retail firm is large enough, it may form a subsidiary trading stamp company. Regardless of ownership structure, the trading stamp company provides the services of printing and distributing the stamps, books and catalogues; of providing the necessary banners, advertising and other promotional aids; of purchasing the gifts and guaranteeing adequate and continuous supply; and of providing redemption facilities. The retailer's obligation is to purchase the stamps from the stamp company, usually in pads of 10,000 stamps at $20 per pad. A pad usually represents $1,000 of retail sales. Apparently the cost of a trading stamp plan to a retailer is equivalent to about 2% of sales. Executive and trade opinion is that a retailer requires an increase of at least 20% in his dollar sales volume if the plan is to be judged a success. (2) A tape or cash register receipts plan is a simplified version of the traditional trading stamp plan. The customer saves her sales receipt slips and redeems them at the store for gifts. Assuming no resulting increase in store sales volume, this plan should account for less than 2% of sales, but how much less is not known.

Questionnaire returns indicate lack of agreement among the retail chains as to the relative importance of premium plans and trading stamp plans as promotional devices. One large chain allocated over 75% of its promotional budget to premium and trading stamp plans while another large chain spent no money on such schemes.

Some food chain store executives would rather not be bothered with premiums and trading stamp plans. In their opinion, the plans at best are defensive measures, to be incorporated when competitors employ such devices, and to be discarded when competitors discard them. The consensus of executive opinion appears to be that the innovator of a trading stamp plan in a given retail trading district achieves a substantial gain in traffic, sales volume and profit, but that such gains are dissipated when competitors imitate the innovator.

Experience seems to bear out the above pattern of behaviour. In 1956, one Toronto food chain introduced a premium plan and it was countered immediately by the chain's major competitor. Similarly, in Ottawa in 1956, three corporate chains introduced trading stamp plans immediately after a voluntary chain introduced a trading stamp plan. In January, 1959, three major food chains in Montreal introduced trading stamp plans as soon as a fourth chain announced its plan. Likewise, in 1958, trading stamp plans were simultaneously discarded by three major chains in the Lakehead area.

It appears that premium and trading stamp plans boost store traffic if competing stores in the trading district have no such plan. The aggressive (or desperate) merchant capitalizes by innovating a plan, but he quickly loses his unique position through reaction by competing merchants. If realignment occurs, and no net benefit is enjoyed by any one competitor, then abandonment of the premium or stamp scheme by one usually leads to abandonment by the others.

c) Contests

Contests that offer prizes are another form of promotion. Contests are somewhat similar to trading stamps in that both types of promotion give away premiums to the customer. Like other types of store promotion, this form of "bonus" merchandising attempts to link customer loyalty to a given store.

An examination of the uses of contests by Canadian food retailers bears out the great popularity of using contests for store openings. The range of contest prizes is wide—from baskets of food to appliances, to automobiles, to houses, to mink coats. Also common are contests that require the contestant to recall the particular brand names of the store's suppliers. Such contests are subsidized to an unknown extent by the suppliers whose brands are advertised by this medium.

Analysis of questionnaire returns shows the varying degree of importance that retail chains place on contest promotions. Only four of the 10 corporate chains budgeted for contests during the fiscal year that such data were requested, and their estimates, as a per cent of total promotional expenditure, ranged from 6% to 12%.

d) In-Store Displays

In-store displays may be defined as any form of visual matter that promotes the sale of goods while the customer is in the store. Sales of products are influenced to some extent by their particular floor location. It is also claimed that: a food article situated at eye level will experience better sales results than if the article were situated at ankle level; a food article which is allotted more shelf space than its competitors will sell better than they; a jumbled, massive display of a food product located on an "island" counter will sell better than if it were located on a counter shelf; and special in-store displays can boost the sales of appropriate products.

It is claimed that such layouts, locations and displays produce an "impulsive" or reflex selection of the merchandise so displayed. While such a claim may be debated, there is little doubt that the self-service feature of the supermarket requires the use of such in-store display tools as tapes, banners, seasonal dress-up materials and mobiles, in addition to the store equipment of counters, cabinets, floor stands and peg boards.

The questionnaire returns report no general pattern of use of in-store displays. All but two of the 10 reporting chains allocated part of their promotional budget to in-store displays. Of the eight chains that did budget for this form of internal promotion, the scale of preference, measured as a per cent of the total promotional budget for the fiscal year requested, ranged widely from 1% to 26%.

In-store display assistance is obtained from food store suppliers, either in varying forms of special display discounts or in contribution by the supplier of the display pieces to be used in the promotion.

Two aspects of the general merchandising strategy of the chain supermarket are of special interest to our inquiry: first, the manner in which prices are used as a competitive weapon; second, the use of special promotional devices.

The absence of consistent markups for particular commodities clearly presents a problem of measurement of the "spread" for any commodity. We have observed that markups tend to vary around some level; also, we observe from Chart 10 that there is a difference in the "normal" markup as between groups of products. However, we do not know whether there is any regularity in the deviation from normal, or whether there is any relation between changes in markup and changes in selling price. We are inclined to believe that the changes are made from time to time in the light of all the circumstances. This is the only answer that could be obtained from chain store operators, or could be discovered from the most minute investigation of markup practices.[1] It is one of the features of merchandising strategy which is related to the skill, ingenuity and judgment of those directing the total strategy. We are also forced to the conclusion that it is impossible, or misleading, to measure the "normal" spread from markups or prices taken at a particular time or over a short period of time.

[1] We are not inclined to express concern at the prevalence of the use of per cent markups in contrast to dollars and cents markups because we are of the opinion that no rigid rules in this respect are adhered to. The *Report of the Royal Commission on Prices* (1949) attaches somewhat more significance to the different effects of the two procedures.

The pricing practices of chain supermarkets are not necessarily consistent with the generally accepted view that markups are related to the total cost of handling particular commodities in retail outlets.[1] In the chain supermarket we encounter an operation in which overhead or indirect costs are an important factor, an immense variety of products is sold, and markups are deliberately used to influence the total volume of business. Evidence we have received suggests that chain stores frequently do study the direct costs of performing particular operations, e.g., the cost of washing potatoes. We believe too that chain stores observe the profitability of different departments, a process which involves some allocation of overhead costs and probably some conception of "normal" markups for particular departments. However, with a heavy investment in permanent facilities, substantial maintenance and operating costs common to the whole store, and labour which at many points handles a great number and variety of products, the total retailing operation is one in which any meaningful allocation of costs by commodities is probably impossible.[2] Moreover, the practice of markups as we have been able to study it means that costs in the retail outlet are not the only or even the pre-eminent criterion for determining markups, either in the short or in the longer run. We are at a loss, once again, to find any consistently applied principle of pricing of particular commodities in chain supermarkets, other than that prices will be adjusted in such a manner as is expected to result in a maximum volume of sales for the store.

Under these conditions, it is quite possible that the markup on a particular commodity may at any time be less than the total cost of handling it. This would be profitable to the supermarket operation if the lower price of this commodity induced larger sales of other commodities, i.e., attracted patronage to the store. The loss could be considered in the same light as an advertising or promotional expense, no different in its effect from the actual expenditure for placing an advertisement in the local paper.

In the case of a commodity on which the markup is low relative to costs, is any of the burden of the policy passed back to the supplier in the form of a lower price paid to him? The decision of a chain retailer to reduce the markup on a particular commodity is made with the purpose of reducing the retail price. If the retail price is reduced to the same extent as the markup, the lower markup has no effect on the supplier. We have already noted, however, that we have not been able to discover any regularity between changes in markup and changes in price, and we have referred to the extensive preparation which goes into the offering of "specials". A special is offered at a temporarily low price, but the markup is not changed if the retailer can pass back the reduction in price to the supplier. We do not have conclusive evidence on this point but there is evidence that in many cases the supplies which have been offered at special prices have also been secured at special prices, on special terms, or as a special deal. At this

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[1] Mr. Knapton of A & P Food Stores, in his appearance at the public hearings, made the following statement: "The food business is a very competitive business, and there have been some merchandising patterns prevalent in the trade with some basic staple commodities merchandised at relatively low markups, considerably below a normal expense rate. In order to offset these, it is necessary to mark some commodities at slightly more than the expense rate in order to arrive at a final markup which will cover your expense rate." *Proceedings*, p. 2946.

[2] Such an allocation of costs would be just as impossible for the small independent stores. But, with a small retail operation, it may be necessary to follow convenient "rules-of-thumb".

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point the structure of the market in which the supplies are procured is relevant to the determination of effects. In a market in which the number of buyers is small, and suppliers become attached to particular buyers, it is certainly possible that the short-term effect is to reduce the price paid for supplies for specials below the amount justified by bulk-buying. In the longer run, if there is any significant regularity with which particular commodities are used as specials, the lower price paid for supplies on these occasions becomes part of the expected or normal price. If the occurrence of specials is capricious, this represents a risk, and therefore a cost to be borne by the supplier.

As we have seen, the evidence is that consumers pay about the same for a basket of food in any supermarket in any particular area. The inference is that, if stores are using the prices of particular commodities to attract consumers, the low prices incurred are balanced by higher prices on other commodities.[1] We have likened the low markup on any commodity to advertising expense. Direct advertising expenses find their way into the prices of commodities, but does that mean that prices are higher than they would have been in the absence of advertising?

The promotional devices, including direct advertising, employed by chain supermarkets are directed towards increasing or maintaining the sales volume of the supermarket as a unit. The supermarkets sell food. This includes food materials and the services associated with them. Additional services, which are themselves promotional, can be included if they prove acceptable to the consumer; the consumer is willing to pay for added services and to meet the costs of providing them. The extensive promotional efforts of food merchandising firms notwithstanding, the information we have provided elsewhere indicates that the quantity of food material consumed per person has not increased.[2] Sales promotion can, however, increase the total volume of sales of particular commodities. The adoption of frozen foods would have been much less rapid and general without promotional effort, and the acceptance of the frozen product has doubtless increased the amount of the product consumed in all forms, although not in proportion to the increase in sales of the frozen product. The increased consumption of frozen peas must have caused some reduction in the demand for dried peas; it may also have reduced the demand for other foods.

In a period of increasing population when the market for all foods is expanding, it is difficult to distinguish the separate causes of increase in the consumption of foods. If the per capita physical consumption of any particular food commodity increases appreciably, there must be a significant measure of substitution and reduction in consumption of other food materials.

In recent years promotional expenditures as a per cent of sales have increased, and the dollar volume of sales has gone up rapidly. It is easy to fall into the error of relating these developments as wholly cause and effect. To a considerable extent they are both the result of the same cause, namely, increasing population and demand. In a period of increasing demand, if each seller wishes to maintain his share of the expanding market and any one of them undertakes promotional activities, all must engage in them. In a period of rising incomes, however, it is easy to pass on the increased cost to the buyer.

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[1] In Mr. Knapton's statement, already cited, p. 55, it is indicated that this is so.
[2] See Part IV.

Efficiencies of Chain Organization

We have referred to the supermarket as the significant unit in the chain store organization. We have noted elsewhere that the supermarket type of retail outlet is also found outside the chain organizations. The chain organizations characteristically use the supermarket type of outlet, however; it is very uncommon among the unattached independent food stores. We have also seen that the voluntary chains have been expanding their operations and growing along with the corporate chains. At the same time the size of the voluntary chain retail stores has been increasing. All of this suggests that, although not an essential part of it, the supermarket is a vehicle which can be effectively utilized within the chain organization.

The competitive advantages of the chain organization result from the large scale of operation. Although not all features of supermarket operations have tended to reduce operating costs, and some activities have tended in the direction of raising rather than lowering the cost of food materials and associated services obtained through supermarkets, the supermarket is itself a large unit, and lends itself to the mass operation of the chain organization. It is an instrument of mass merchandising. In the preceding section we looked at the distinctive practices of supermarket operation. In this section we are concerned mainly with the activities of the chains which go on behind the supermarket store and through which the large chain organization achieves efficiencies or other advantages which strengthen its competitive position compared to that of the small organization.

At an earlier time the chain food stores were reputed to offer competition to the independent store mainly in terms of prices. We have not attempted any detailed study of the history of the operations of chain organizations; we are satisfied, however, that up to a point their growth has been due to the capacity to offer effective competition in terms of prices stemming from the economies of large-scale operation. Even if it is true today, as suggested by representatives of chain store organizations, that price competition is not their principal competitive weapon,[1] it can be argued that to some extent their ability to operate at lower costs and to compete in terms of prices has made it possible for them to pursue other forms of competition successfully.

In organizing their total merchandising efforts, the chains have made changes throughout their whole system of procurement and sale of food. Their efforts have been centred on attaining a high total volume of sales through a high rate of turnover per unit of retail shelf space and per unit of warehouse space.[2] The maintenance of the high volume on a continuous basis is dependent on the highly co-ordinated supply system that has developed.

There are two aspects of the large volume of business of individual chain organizations: (1) economies of scale; (2) enhanced bargaining position arising from the large scale.

The economies associated with large volume which tend to make for low unit costs, and place the chain organization in a favourable position to com-

[1] See, for example, the following statement in the submission of Loblaws to the Commission at its public hearings: "In connection with advertising, it may be mentioned that the growth of the Loblaw chain has never put price first. Prices compare favourably, and must compare favourably, with prices of competitors but the first emphasis is on quality." *Proceedings*, p. 3713.

[2] To the extent that they accomplish this, they also obtain a high rate of turnover per unit of labour.

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pete in terms of prices, spring from a number of factors. In the first place, both the merchandising and the procurement aspects of retail organization and operation require a vast amount of information. The combination store, with its multiplicity of commodities drawn from all parts of the agricultural industry, and served by many different secondary industries, is a complex and complicated concern. Its success can be affected by the extent of the information available and the skill with which the information is interpreted. The unattached independent storekeeper simply cannot be fully informed on supply conditions; this service has been provided to him by his wholesaler on whom he has to rely, but whose judgment he does not have to accept. He can act independently if he so chooses. Similarly, the judgment of the wholesaler may be affected by the size of his own operations, and the opportunity he has, through specialization within his organization, to become fully informed. Again the task is a difficult one because of the great range of commodities handled. Further, the wholesaler may find his knowledge rendered ineffective if it does not influence the actions of the retailers with whom he is associated. Indeed this seems to be evident from certain features of the development of the voluntary chains. Not only are the wholesalers servicing independent retail stores within a chain becoming larger, but there is an increasing tendency for them to reduce the opportunities for individual action on the part of the operators of retail outlets. The sponsoring wholesaler is increasingly intruding into the management functions of the retail outlets.

In the second place, chain stores are organized in a manner that enables information on all aspects of the business to flow quickly to those who make use of it. They are also organized to obtain and analyze information on many factors outside the business itself. Information on factors both within and outside the firm is crucial if the firm is to be able to adapt quickly to changes. To cope with the necessity of organizing information, some chain organizations have established centralized research departments. In a quickly changing situation, such as has characterized food marketing in recent years, access to information and the capacity to employ those capable of interpreting it have proved particularly important to the chain store organizations.

In the third place, the large organization which can engage the services of highly competent specialists in information, procurement and merchandising techniques, and can spread the cost of these services over a large volume of sales, has a substantial advantage in operating efficiency over the smaller independent concern. The corporate chains within their company organization have exploited their potential advantages of size most effectively. But the success of the voluntary chains has also reflected the gains from large-scale organization. The wholesalers in voluntary chains have reached forward into the associated, although independently owned, retail outlets and have imposed effective merchandising methods on them. At the same time the corporate retail chains expanded their wholesaling activities because of the advantages from integrated operations; the volume of business undertaken at the wholesale level has provided opportunities for efficiencies of operation and procurement. The unattached independent retail stores and the relatively small wholesaler serving them have both found themselves at a competitive disadvantage.

We have outlined various features of large-scale operation in food retailing which suggest net economies with increasing size. We do not have any evidence on which to conclude that the large Canadian food chains have increased the efficiency of their operations as a result of their expansion over recent years. In our opinion, it is unlikely that the large chain organizations need to operate at their present size in order to obtain the full advantages of economies of scale.

In addition to the economies of scale dealt with above, the large chain organizations—both corporate and voluntary—have a competitive advantage arising out of their enhanced bargaining power. Their procurement policies have been adapted to increasing scale and both types of chains have used their strengthened position as large-scale buyers to modify the nature of their relations with their suppliers, including the terms on which they buy from them. The impact of chain store procurement practices on processors and others is dealt with later in the report.[1] At this point we refer to one or two features only of these practices which are clearly related to the competitive position of the chains.

The corporate and voluntary chains have been able to draw heavily on suppliers for advertising allowances. In this way the chains have been able to pass back to suppliers part of the costs of advertising and thus to reduce the extent of these costs which must be borne by themselves: the division of costs is shifted even if total advertising costs are not reduced. The competitive position of the unattached independent store is affected in so far as these stores or the wholesaler supplying them are unable to extract the same terms from their suppliers.

The large chain organizations have also been able to obtain from suppliers substantial discounts for quantity purchases—discounts which cannot be secured by smaller buyers. In so far as suppliers' costs per transaction are reduced in relation to the size of the transaction, there is a real gain from quantity buying which may, in the end, be passed on to the consumer. But the immediate effect is to improve the competitive position of the chain stores vis-a-vis the unattached independent.

Another way of looking at these discounts and allowances is to note that they lower the effective prices to the buyers receiving them.[2] Thus, there is some degree of error in using actual prices that are quoted in order to look at a breakdown in price spreads; in doing so we underestimate the retailer's spread and overestimate the supplier's spread.

The Commission in its questionnaire to corporate chains requested information on the magnitude of various types of discounts and allowances and changes that have taken place in the use of different types. During the past 10 years, while the overall magnitude of promotional allowances and volume and other discounts in relation to purchases has remained relatively constant, there has been a shift towards more use of promotional allowances and away from the traditional volume discounts. In 1957, for the seven largest corporate chains returning the Commission's questionnaire, the total of discounts and allowances amounted to $11 million, which is equivalent to 1.2% of the cost of all goods purchased by

1 See Chapter 3 of this part of the report.

2 The buyers will presumably have additional promotional expenses when they incur the expenditure of the advertising for which the advertising allowances were granted.

these chains. About half of the total was in the form of promotional allowances. As this is an overall total for all purchases of the chains considered and includes many products on which no discounts and allowances are received, the impact would be considerably greater for certain types of food products.

The area of special discounts and allowances was the subject of an intensive study by the Combines Investigation Branch of the Department of Justice.[1] They reviewed the discount structures, including trade discounts (which distinguish between classes of customers), quantity discounts, cumulative (volume) discounts, and special discounts and allowances. The latter group—special discounts and allowances—was defined as "all those forms of discount and allowance which do not appear on the face of the invoice". These were the subject of particular attention in the report; promotional allowances would be a large factor in this category. Two results of the study are pertinent here. The first is that no clear-cut evidence was obtained from a survey conducted in 1954 that the chains with the largest purchases have the highest rate of receipt of special discounts and allowances.[2] Second, the rate of payment of such discounts and allowances by suppliers to corporate and voluntary chains was much higher than those paid to wholesalers and other accounts—2.34% and 2.47% of sales respectively, as compared with 1.11% and 0.65% of sales respectively, to the last groups.[3]

We will return later to the effect of discounts and allowances on the competitive position of the retail food chains vis-a-vis their suppliers.[4] It should be noted at this point, however, that the increasing concentration of purchases of chain organizations may well have the effect of exerting downward pressures on prices of suppliers who in turn may well exert pressure on the prices paid to farmers and fishermen. To the extent that these pressures cannot be exerted through adjustments in prices themselves, discounts and allowances fill a particularly significant role.

Availability of Capital

The rate of creation of new capital in the economy as a whole is related to incomes and prices. The relationship is established in the following way. The process of creation of capital goods, although not the only activity putting income in the hands of consumers, generates income. In so far as the employment of labour and other productive resources in capital creation competes for these resources with industries producing consumer goods, it does at the first stage limit the rate of expansion of production of consumer goods. The increased demand for these goods, stemming from the increased total disposable incomes, may then push up the prices of consumer goods.

The creation of new assets by business corporations is not the only source of new capital creation. It is evident from Table 5, however, that there is some relation between disposable incomes, prices, and the rate of creation of new assets by Canadian corporations. We have already presented our analysis of the

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1 *Report Transmitting a Study of Certain Discriminatory Pricing Practices in the Grocery Trade made by the Director of Investigation and Research,* Restrictive Trade Practices Commission, Department of Justice, Ottawa, 1958.

2 *Ibid,* see Table 5-3.

3 *Ibid,* see Table 5-2.

4 See Chapter 3, p. 70.

relation between disposable incomes and prices in Part I and have distinguished three periods within the last 10 years. Table 5 shows that investment in new corporate assets advanced rapidly in 1950 and 1951, when incomes and retail prices also rose; increased at a less rapid rate from 1951 to 1954, when incomes and prices rose less rapidly or declined; and picked up again in 1955, contributing to a renewed increase in incomes and prices. The table also shows that the creation of new assets in the food industries followed the same pattern.

Table 5—Relation Between New Capital Assets of Corporations, and Changes in Disposable Incomes and Prices, 1949 to 1957

(Increases by Years)

Year	Total Assets of all Corporations[a]	Aggregate Personal Disposable Income	Consumer Price Index	Total Assets of Food Corporations[a]
	(%)	(%)	(%)	(%)
1949/50	12.4	7.1	2.9	10.4
1950/51	13.2	16.6	10.5	9.6
Average 1949–51	12.8	11.8	6.7	10.0
1951/52	10.4	8.6	2.5	8.7
1952/53	12.4	5.2	−0.9	8.9
1953/54	8.9	0.5	0.6	6.2
Average 1951–54	10.6	4.7	0.7	7.9
1954/55	12.3	7.9	0.2	9.6
1955/56	16.0	10.0	1.5	11.8
1956/57	9.2	4.7	3.2	7.4
Average 1954–57	12.5	7.5	1.6	9.6
Average 1949–57	11.8	7.5	2.5	9.1

[a] Source: *Taxation Statistics*, Department of National Revenue (data for profit and loss corporations).

Table 6 shows the trend of assets of corporations in food processing, wholesaling and retailing.[1] The rate of increase in assets of food firms would be significantly greater than indicated in the table if the new investment in retail store facilities was fully included. It is generally not included in the assets of corporations because of the rise of "lease-back" arrangements by which specialized firms finance the building of stores and lease them back to the corporate chains on a long-term basis. It will be seen that total assets in food retailing have increased relatively rapidly during the whole period, 1949 to 1957; were relatively well maintained during the years of slower advance, 1951 to 1954; and have expanded remarkably since 1955.[2]

The investment funds from which the retail food corporations acquire new assets include bank loans, issue of stocks and bonds, and accumulated earnings retained and reinvested by the corporations. Table 7 shows the sources for financing the expansion of retail food corporations between 1949 and 1957. We

[1] Retail food corporations include corporate chain store organizations and other corporations engaged in food retailing.

[2] To avoid misinterpretation of the data in the table, it should be noted that the per cent rate of investment for corporations in food retailing overstates the rate at which investment in food retailing as a whole has increased, because the chain organizations have increased their share of the business. Investment in the businesses of the other retailers which are not incorporated has not been increasing as rapidly.

Table 6—Total Assets of Corporations in Food Processing, Wholesaling and Retailing, 1949 to 1957

Year	Processing		Wholesaling		Retailing		All Food Corporations	
	Total	Annual Increase	Total	Annual Increase	Total	Annual Increase	Total	Annual Increase
	($ million)	(%)	($ million)	(%)	($ million)	(%)	($ million)	(%)
1949	913.6	—	338.0	—	200.4	—	1452.0	—
1950	991.7	8.5	388.6	14.9	223.2	11.4	1603.5	10.4
1951	1080.1	8.9	418.6	7.7	259.2	16.1	1757.9	9.6
Average 1949–51	—	8.7	—	11.3		13.7	—	10.0
1952	1147.0	6.2	485.7	16.0	277.3	7.0	1910.0	8.7
1953	1351.4	17.8	471.4	−2.9	257.7	−7.0	2080.5	8.9
1954	1396.9	3.4	467.8	−0.8	345.2	33.9	2209.9	6.2
Average 1951–54	—	8.9	—	3.8	—	10.0	—	7.9
1955	1495.4	7.1	526.8	12.6	400.5	16.0	2422.7	9.6
1956	1678.9	12.3	551.8	4.7	477.5	19.2	2708.2	11.8
1957	1730.1	3.0	617.5	11.9	562.0	17.8	2909.6	7.4
Average 1954–57	—	7.5	—	9.7	—	17.6	—	9.6
Average 1949–57	—	8.3	—	7.7	—	13.8	—	9.1

SOURCE: *Taxation Statistics*, Department of National Revenue (data for profit and loss corporations).

Table 7—Sources of Finance for Retail Food Corporations, 1949 to 1957

	Accumulated Earnings Retained		Stocks Outstanding		Bonds Outstanding		Bank Loans Outstanding		Total	
	Total	Annual Increase	Total	Annual Increase	Total	Annual Increase	Total	Annual Increase	Total	Annual Increase
					($ million)					
1949	42.8	—	47.6	—	19.6	—	5.8	—	115.8	—
1950	50.4	7.6	49.0	1.4	19.3	−0.3	6.9	1.1	125.6	9.8
1951	57.7	7.3	53.7	4.7	20.0	0.7	13.3	6.4	144.6	19.0
1952	65.0	7.3	56.5	2.8	16.2	−3.8	14.2	0.9	151.9	7.3
1953	57.8	−7.2	49.7	−6.8	26.5	10.3	11.2	−3.0	145.2	−6.7
1954	78.4	20.6	58.8	9.1	43.5	17.0	14.3	3.1	194.6	49.4
1955	93.7	15.3	66.0	7.2	44.2	0.7	10.2	−4.1	214.1	19.5
1956	113.3	19.6	99.1	33.1	63.5	19.3	14.1	3.9	290.0	75.9
1957	131.3	18.0	101.0	1.9	89.4	25.9	16.6	2.5	338.3	48.3
Total Increase 1953–57	73.5	—	51.3	—	62.9	—	5.4	—	193.1	—
Total Increase 1949–57	88.5	—	53.4	—	69.8	—	10.8	—	222.5	—

SOURCE: *Taxation Statistics*, Department of National Revenue (data for profit and loss corporations).

notice in the first place that in the nine years, 1949 to 1957, total investment by these corporations (not including property held under lease) amounted to $222 million. Of this, however, $193 million or 85% was invested in the four years 1954 to 1957. Over the nine years, funds have been provided in roughly the following proportions: accumulated earnings, 40%; stock issues, 25%; bond issues, 30%; bank loans, 5%. In the later years of more rapid increases in investment, the amount of new investment financed from retained earnings has been well maintained; bank loans have remained a relatively small factor; and the corporate chains have turned to the market to finance a substantial part of the more recent and more rapid expansion.

We have noted that the rate of increase in assets of retail food firms does not, because of the use of "lease-back" arrangements, take account of the increased investment in retail store facilities. The general practice of chain store organizations for many years has been to build and sell, or have built for them, stores specially constructed for their use and to lease them back on a long-term basis, usually 20 years or longer. Investing institutions, such as life insurance companies, own a considerable proportion of these store premises. In some instances subsidiary companies own some of the stores and warehouses of the corporate food chain as, for example, Loblaw Leased Properties Ltd., and Ivanhoe Corporation, the latter a subsidiary of Steinberg's. One of the corporate chains, in its reply to the Commission's questionnaire, indicated that at the time of a shift away from ownership of store premises early in the period under review, important amounts of capital were released for expansion needs.

Corporations engaged in food retailing, in financing their increased business, have relied on retained earnings to a considerable extent. They have also increased the use of bond financing. New common stock has been issued only to a limited extent. With the overall rate of return during the period from 1949 to the present at a level considerably above the rate of interest paid on preferred shares and bonds, the return on the investment of holders of common shares has remained at a relatively high level throughout the period.[1]

We refer above to the earnings on the retail food operations of these corporations. In addition, many of these firms have derived considerable profits from their real estate operations. This shows up when they sell the stores which they have erected on the sites previously purchased.

The relatively high rate of return on equity capital by the corporate chains has to a large extent been retained for reinvestment in the expansion programs of these firms. This is not unusual. Firms typically maintain a reasonable stable dividend policy; earnings are retained in periods when they are high and dividends are to a considerable extent maintained when earnings decline. Earnings have been at a high level throughout the last decade and have, to a large extent, been retained; as a result, the equity per share has increased rapidly.

While the corporate chains do differ in their dividend policy, it is apparent that, since the early '50's, the two largest chains, Dominion Stores and Loblaws, have followed much the same course. The rate of dividend payments in relation to net profits after taxes has been relatively constant at about one-third. The dividends actually paid on common shares represent a return of about 5% per

[1] We deal with the rate of return on investment in more detail in Part III.

annum on an investment made in the early '50's. The investor with common stock has the enhanced value of his stock as an additional return. In the case of Steinberg's, where the company is controlled by the family, the policy appears to have been not to distribute dividends on common shares to any extent; dividends have been paid on the preferred stock. Dividend payments during the last three years have averaged less than 10% of the net profit after taxes. In the case of Canada Safeway, the dividend payments have been very irregular. With all of the common stock owned by its parent company, however, there is no incentive to maintain a stable dividend as is the case with companies whose shares are in the hands of the public. In the case of A & P, information on the overall Canadian operations is not made public. The Great Atlantic and Pacific Tea Company is incorporated under the Federal Companies Act and Atlantic and Pacific Food Stores is incorporated under Quebec legislation.

The earnings, both in the grocery and real estate operations, coupled recently with the shift in preference to common stocks, have caused sharp increases in the prices of the common shares of the corporate chains. For example, the prices of the common shares of Dominion Stores and Loblaws have increased rapidly during the '50's. For the former, the share prices in 1958 averaged almost six times those of 1950, and for the latter, more than three times. These increases are considerably more rapid than the increase of 98% for the overall food and allied products group, and 82% for the total index as reported by the Dominion Bureau of Statistics. The increase for these two corporate chains indicates the effect of relatively high earnings when they are concentrated on the holdings of equity capital.

For the other three of the major corporate chains, information is not sufficient to look at increases in stock prices over the period. In the case of Steinberg's, the common stock is held by the family; class A shares (equivalent to common stock, except that they are non-voting) were only sold to the public in late 1958. The common stock of Canada Safeway is owned by the parent company; only preferred stock is listed on the stock exchange. A & P has not issued public stock in its Canadian operations.

In Part III, we will discuss profits in the food industries. At this point we are concerned mainly with access to capital for expansion as a factor contributing to the relatively rapid growth of the chain organizations. We have pointed out the remarkable manner in which food retailers, and particularly the chain organizations, have adapted themselves to the needs of consumers during the recent period of expansion of the economy and of substantial and rapid changes in the patterns of consumer behaviour. We have noticed that this period was a favourable one: the combination of expanding demand and pressure of supplies of food materials was conducive to profits in the food industries for all firms, and for profitable growth by those firms in food retailing which were forward-looking enough to see the opportunities, concerned to be in the forefront of expansion, and at the same time able to secure on favourable terms the necessary funds for investment.

We have seen that the total amount of new investment reached substantial proportions, and that much of it has been in large units. It seems evident to us that the chains were in a favoured position to obtain the investment funds

required. As we will confirm later, the general climate of conditions, along with the efficient operation of the chains, did result in a substantial rate of profits. The chains, already operating on a large scale, found that their large aggregate earnings provided them with a ready source of funds for reinvestment. Further, the profit position and prospects, the fact that they were themselves underwriting their expansion in considerable measure, and the greater facility with which large competent organizations can secure capital in the market placed the chains in a preferred position to the smaller, unattached food retailer in providing for expansion.

3. The Independent Food Store

In the previous section we have dealt with the causes of the growth of the chain supermarket organizations, both corporate and voluntary, in recent years. The total sales of food by unattached independent stores appear to have decreased somewhat during the period from 1951 to 1958, from $1.2 billion to $1.1 billion, which would represent a decline in the share of total food sales by this group from 63% to 36% during this period. This has not, however, meant a decline in sales of existing stores because much of the increase in the voluntary chains' business has been occasioned by the shift of stores into voluntary chains.

The unattached independent food retailer has a place in food distribution which can be attributed to the particular advantages that he may have. Many of these advantages may also exist for retailers in voluntary chains. Independent stores have been able to compete effectively with the chains particularly in the less densely populated areas where the volume of sales has not been sufficient for efficient chain operation. In areas where they compete directly with the chains, they are able to provide certain types of services such as: (1) providing a degree of personal attention to the shopper not possible in a larger organization;[1] (2) offering telephone service, charge accounts and delivery service;[2] and (3) in some instances staying open to serve customers in evenings and on holidays (particularly where the workers in the store are members of the owner's family). These advantages are attributable to a considerable extent to the fact that the independent store operator may be the owner, the manager and the worker in the store along with members of his family. In addition to providing the above services, he has greater flexibility and can adjust prices quickly and in some instances can even buy products advantageously. There also appears to be a place for independent stores handling food specialties, although the potential extent of overall operations here does not appear to be great.

In addition to providing services of a different nature from those provided by the chains, the independent store, because of its characteristic combination of owner-manager-worker into one, has a resiliency which enables it to survive

[1] Mr. Falls, of the Ontario Federation of Labour, made the following point: "In the old days you saw the butcher leaning on a knife and talking to a young lady and telling her how to cook the meat. Today he is working downstairs on productivity . . . and they have girls wrapping . . .", *Proceedings*, p. 2769.

[2] In the submission of the Retail Merchants' Association of Canada, it was indicated that fewer of these services are now being offered by the independent stores than previously, *Proceedings*, pp. 4407 and 4441.

a period of adversity. We have observed a rapid growth in the chain store business during a period of rising incomes. With their many fixed obligations, these organizations—in particular the corporate chains—would have more difficulty in a period of declining incomes.

While, as we have seen, the corporate chain stores have a considerable advantage in availability of capital, it is still possible to enter business as an independent food retailer with a limited amount of capital. To gain a reasonably large volume of sales, however, a store must be in an appropriate location. This has become increasingly difficult as desirable sites have been acquired by the chain store organizations several years prior to store construction. For example, few independent store owners have found it possible to obtain locations in shopping centres.[1] Such locations are particularly important because zoning regulations have the effect of limiting alternative locations. We do not suggest that there will not continue to be a large number of independent retailers. However, the increasingly rigorous competition to which they will be subjected and the relatively small scale on which most of them will operate will require of their management a high level of competence and efficiency.

We have set out these considerations to indicate the reasons for the continued existence of the large number of independent retailers. There appears to be a place for them in food retailing. It should be noted, however, that the incomes of the many retailers operating small stores are and will remain relatively low.

[1] See p. 43.

CHAPTER 3

FOOD WHOLESALING, PROCESSING, ASSEMBLING

1. Wholesaling

A wide variety of agencies engaged in food distribution are called wholesalers. Of the 1,659 establishments defined as wholesalers proper[1] in the 1951 Census of Distribution, 1,277 were classified as Wholesale Merchants and 114 as Voluntary Group Wholesalers. The functions of the Wholesale Merchants include some or all of the following: assembling, warehousing, order-taking and delivery, and furnishing customers with such services as merchandising aids, credit, and help in store engineering. The voluntary group wholesalers perform these functions for the retail merchants affiliated with them.

The number of wholesalers declined between 1941 and 1951; this, of course, includes the wartime period during which there were some restrictions on the establishment of new businesses. The decline was noticeable for all groups of wholesalers handling specialized lines of food products, except those handling frosted or frozen foods and canned foods. On the other hand, wholesalers handling a general line of groceries increased in number during the period, and in 1951 accounted for 60% of the total sales of all wholesalers proper.

The changes that took place between 1941 and 1951 were clearly associated with the decline in the specialty food store and the rise of the combination food store in retailing.

During the period since 1951, the business of all wholesalers as a group has been increasing, with sales for the three groups (those handling groceries and food specialties, fresh fruits and vegetables, and meat and dairy products) having increased from $1.2 billion to $1.8 billion between 1951 and 1957. Most of this increase has been accounted for by one group, those handling groceries and food specialties, of which practically all the business is done by those handling a general line of groceries. By 1957, these wholesalers handling a general line accounted for over 70% of the sales of all food wholesalers.

This continuation of the shift evident in the previous decade is associated with two factors. First, the decline of the specialty food store and the rise of the combination food store, already underway before 1951, has, as we have observed previously,[2] continued during the '50's at a rapid rate. Secondly, with the rapid development of the voluntary chains in the '50's,[3] the business of the general line food wholesalers servicing the retail outlets in these chains has been increasing.

Some of the larger wholesalers in Canada are: Western Grocers, a subsidiary of George Weston Ltd. (operating in western Canada with subsidiaries of its own which include Dominion Fruit Company, the parent company of the retail

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1 Wholesalers proper are distinguished from the other groups under the general designation of wholesalers in the Census by the fact that they buy and sell on their own account.

2 See p. 33.

3 See Chart 9, Chapter 2.

chain of Shop Easy Stores Ltd.); National Grocers (operating in Ontario); Kelly, Douglas and Co. (operating mainly in western Canada, with a subsidiary, Super Valu Stores Ltd., a retail chain operating in British Columbia); and M. Loeb Ltd. (having expanded recently from operations in the Ottawa area to Sudbury with the acquisition of J. A. LaPalme and Son, and to Alberta, where partial interest has been acquired in Edmonton Associated Wholesale and Horne & Pitfield). All of these wholesale firms participate extensively in voluntary chain operations.

With approximately two-thirds of the retail food business now handled by corporate or voluntary chains, the role of the wholesaler servicing the completely independent retail store has declined. The increase in the business of food wholesalers as a group during the period from 1951 to 1957 can be attributed almost entirely to the rapid increase in the business of voluntary group wholesalers.

We have described the voluntary chains in the preceding chapter.[1] While they may be organized on the initiative of the retailers themselves, most of the rapid development which has taken place during the '50's has been among voluntary chains sponsored by wholesalers. Active recruiting by wholesalers of stores to participate in voluntary chains, and their assistance with merchandising and other matters once the stores are in the group, represent an intrusion of wholesalers into the retailing of food similar to the performance of wholesaling by the corporate retail chains. The degree of intrusion varies between the different voluntary groups and also between the individual wholesalers within a particular group. For example, wholesalers servicing retail stores in the largest voluntary chain in Canada, Independent Grocers Alliance, participate to a considerable extent in the management of the stores, while there are voluntary groups at the other extreme where there is little more than a common store name. In these latter cases participation in a voluntary chain results in little change: the merchandising and other services may be little different from those traditionally performed for unattached independent retailers by the wholesalers who service them.

To recapitulate, the three principal changes which have occurred at the wholesaling level in recent years have been: (1) the increasing assumption of the wholesaling function by the corporate chains as these organizations have increased their share of the retail market; (2) the increasing association of independent retail stores with voluntary chain wholesalers. This was induced by the competition of the corporate chains. Wholesalers and independent store operators have recognized their identity of interests, and the expansion of the share of the retail market secured by stores associated with voluntary chain wholesalers has proved the effectiveness of these arrangements; (3) retailers outside of the voluntary chains have endeavoured by various means to meet the competition of the chain stores, both corporate and voluntary. To the extent that wholesalers participating in voluntary chains give more limited service to unattached independent stores, these stores are at a disadvantage. However, a number of wholesalers have instituted cash and carry warehouses (with or with-

[1] See p. 37.

out self-service) in an attempt to reduce the cost of food to the smaller retailers. Wholesalers themselves have continued to feel the impact of the increasing proportion of the retail food business done through the chain stores.

2. Processing

Firms in the processing industries process the products of the farm into the form wanted by the consumer. They also store both the raw material and the processed product. For transportation they rely mainly on specialized transportation agencies. Product standardization (or quality control) and packaging, as well as a number of other functions, are performed by food processors. Many non-food by-products are often produced as part of the diversified operations. These range from the drugs produced in the meat packing industry to the beet pulp produced in sugar refineries for use as animal feed. Food processing firms are also engaged frequently in other enterprises, for example, fertilizer production in the meat packing industry. Where these enterprises are carried on in the same establishment as the food processing, the value of the output is included in the statistics of value of products produced.

The Situation in 1951

In 1951, there were 5,633 establishments (plants) processing food products of farm origin. They purchased materials (mainly raw materials) valued at $2.0 billion, and sold products of gross value of $2.6 billion.

In terms of the total value of products sold, the major group comprises those handling livestock and livestock products, including dairy products. These establishments accounted for half the total in 1951. Other groups, in order of size, were flour mills, bakeries, fruit and vegetable processors, sugar refineries, and breakfast food plants. In terms of number of establishments, the most numerous groups were bread and bakery products (2,607) and butter and cheese plants (1,690). These industries include many small local plants. The value of sales per establishment was largest in the slaughtering and meat packing industry. One hundred and fifty-five meat packing plants sold products valued at $0.9 billion, or about $5.7 million per plant. (Their cost of materials amounted to about $5.0 million per plant.) The next highest value of sales per plant was in the flour milling group. Here 108 establishments sold products valued at $0.3 billion, or $2.6 million per plant (cost of materials averaged about $2.2 million). In all of the groups there are, of course, large variations in the size of plant.

The degree of concentration of ownership varies considerably in the various fields of food processing. Ownership of butter and cheese plants[1] tends to be widely dispersed and many local plants are owned and operated by farmer cooperatives. In 1948, five firms in the slaughtering and meat packing industry produced 70% of the total output; three firms in the prepared breakfast foods industry produced 92% of the total output. Other fields which showed an appreciable concentration included (beet) sugar refining (four firms, 100%, condensed

[1] Excluding those producing special process cheese.

milk (six firms, 62%), fruit and vegetable processing (three firms, 40%), bread and other bakery products (five firms, 33%), and flour milling (three firms, 32%).

Developments since 1951

In the past 10 years, the value of products sold by the foods industry has increased steadily. While part of the increase can be attributed to increased prices, the increase in the volume of production from 1949 to 1957 was of the order of 33%.

A number of changes that have taken place in the operations of food processors have been occasioned by the changing structure of food distribution outlined above. The changing structure includes the increasing concentration in food retailing, and the pronounced move towards integration of wholesaling and retailing functions. The impact on processors is conditioned to a large extent by whether or not their products are of a type that are sold under a brand name. For such products, the appeal to the consumer is made largely on the basis of the brand. The supplier is under constant pressure to maintain his "share of the market" in order that his brand will be kept on retailers' shelves. This entails the maintenance of a flow of the product through the year in a volume sufficient to meet the demands of the large buyers, and the provision of a large variety of items and package sizes.

The processor of products which are sold under brand names appeals to the consumer through advertising and other promotional devices in order to differentiate his products from those of competitors. Where most of the products of an industry have these characteristics, promotional expenses are relatively high. This is particularly evident in the prepared breakfast foods industry and to a lesser extent in firms processing fruits and vegetables.[1] The promotional expenditures in these as well as other fields of food processing may, as we have observed previously, take the form of advertising allowances to distributors,[2] or they may be incurred in advertising and other promotional activities carried out by the processing firms themselves.

Products of a type that are not sold under a brand name, such as uncured meats and fresh fruits and vegetables, fit into a role of particular significance. They are often used by retailers as "specials" to draw in customers.

Superimposed on the features of the products referred to above is the desire of the chain retailers to economize on the costs of procurement. They demand a large volume and wide variety of products and package sizes. The small processor has difficulty in meeting these demands. Neither is he in a position to obtain some of the technical efficiencies available to the processor who handles a wide variety of items as, for example, the greater efficiency possible when operations are conducted over a longer season.

There has also been in food processing an increased centralization of the selling function in head offices. While this development did not start during the

1 See later sections dealing with the particular fields of food processing.
2 See p. 60.

past 10 years, it has now reached a stage where the individual salesman is permitted little flexibility. To a considerable extent, the sales function is being shifted to head office where sales are handled by a smaller but more highly skilled staff.

With the increased bargaining position of the chain store organizations, there have been a number of developments affecting all processors, whether large or small. There has been an increase in the use of distributors' (wholesalers' and retailers') brands in certain lines, and distributors have increased the degree to which they purchase products on specifications. Also, the increased bargaining power has enabled the chain organizations to obtain advertising and other allowances except in a small number of cases where suppliers have been able to persuade the consumers to demand their products through extensive national advertising. In addition, the holding of inventories of seasonally processed products, such as fruits and vegetables, has been shifted back to the processors. To the extent that processors are successful in passing back the effects of the increased bargaining power of the chains, prices of primary producers are lowered and price spreads increased.

While changes in the various fields of food processing have been less striking than those in the retailing and wholesaling of food, many changes have occurred. The products themselves have been changed with the demand by consumers for greater variety and for more "built-in maid service". Many changes have also been made in food packaging. Extensive research programs have resulted in a continual stream of new products, and these have typically been accompanied by extensive promotional programs to ensure that the products attain sufficient volume to hold places on the retailers' shelves. Examples of the development of new products in recent years are the lines of baby foods and frozen foods that have come on the market. These changes in products affect prices at various levels, and the changes in one field often have widespread effects as, for example, the impact of the promotional activities in support of prepared breakfast foods on the sales of bakery and other products.[1]

The objective of promotion from the point of view of food processors is that the activity contribute to company profit. No firm wishes to make a significant expenditure unless it feels assured that such an expenditure will be profitable to the firm. Consequently, promotional activity may aim at: (1) selling more of a processor's products; (2) selling more of the processor's higher gross margin products; (3) increasing the processor's share of the market; (4) increasing consumer loyalty to the processor's product; or (5) obtaining wider and more intensive distribution at the wholesaler and retailer level. These, and other aims, are sometimes thwarted by competitor activity and customer pressure. For example, aggressive promotion on the part of competitors may force the processor to embark on a promotional campaign to maintain rather than increase his share of the market. Customer buying power may alter the processor's aim from one of obtaining wider and more intensive distribution to one of maintaining existing distribution.

The manner in which promotion is employed depends on the firm's prevailing attitude towards the role of promotion as an effective vehicle of marketing effort for the exploitation of existing or potential market opportunity. At any one time,

[1] Two of the bakery firms brought out this point in their replies to the Commission's questionnaire.

different processors in the same industry may apply different weights of importance to promotion as a form of marketing effort. For example, a processor may think it more worth while to employ more salesmen than to employ more promotion. In other words, the aims of promotion are not exclusive; they are a part of the marketing aims of the company.

Selection and use of the many available promotional devices depend on the processor's evaluation of such devices to fulfil the tactical role selected for them.[1] As stated above, competition in its many forms forces some processors to use promotional plans that deviate from their aims of promotional effort.

Existing promotions by food processors are of two types: price promotions and non-price promotions, some of which are directed to the trade and others directed to the consumer.

Price promotions directed to the food trade range from quantity discounts of various types, to shelf and display discounts (a discount if the customer displays the product at a certain location in the store), to "baker's dozen" deals (an additional unit of the product provided at no cost over the number ordered). Many other arrangements exist.

Questionnaire returns from the food processing industry for the year 1957 indicate that very few firms grant shelf and display discounts.[2] One breakfast food company allowed a shelf discount in the form of merchandise; a firm in the dairy products industry provided for such allowances on certain products; a flour milling firm gave one at certain times of the year to retail food chains; and a meat packer discounted for retail location. End-of-year cumulative quantity discounts are prevalent in the fruit and vegetable processing industry and in the ice cream segment of the dairy industry.

Price promotions that are directed to the consumer include one-cent offers, bonus coupons, mail-in premiums, banded deals (a multiple number of units banded together at a special price), and outright price discounts that may or may not be printed as part of the label.

Non-price promotions directed to the trade include such methods as advertising in the trade papers, contests for store managers and the granting for a limited time of exclusive distribution rights on new products. Generally, while such practices as trade advertising prevail throughout the food processing industry, they account for a relatively small share of the promotional budget. By far the largest portion of the processor's promotional budget is allocated to the non-price type of promotion that is directed to the ultimate consumer—either directly to the consumer or to the consumer through the auspices of the retail stores. Non-price promotions that are directed to the ultimate consumer via the store include co-operative advertising allowances, the use of store demonstrators, in-store displays, in-pack premiums and packaging changes.

One breakfast food firm allocated 14% of its 1957 promotional budget for co-operative advertising. Such allowances are considerable in the fruit and vegetable processing industry as well and range from 13% to 32% of the promotional budget. A fish processing company allowed 16% of its promotional budget to

[1] *Canadian Grocer* lists 50 kinds of promotional schemes. See p. 30 of the September 27, 1958 issue.

[2] However, it is conceivable that such discounts may, in fact, be given, but accounted for under a different promotional category, such as "special deals" or "advertising allowance".

co-operative advertising, while a meat packer allowed 12%. Store demonstrators are employed mainly in the fruit and vegetable and meat packing industries; the returns indicate a range of 2% to 4% of the promotional budget. There is also the supplying of display materials to be used inside the stores. Budget allocations for such displays ranged from 2% to 73%, with no consistency within any particular industry. For example, our data indicate the following ranges: 3% to 21% in the meat packing industry; 6% to 24% in the fruit and vegetable processing industry; 2% to 6% in the breakfast foods industry; and 8% to 73% in the dairy products industry. In-pack premiums are an important promotional device in the breakfast foods industry; their cost ranged from 5% to 30% of the promotional budget. We do not have data on costs of package changes: while the intent of the many changes in packaging design and materials are promotional in nature, the costs of such changes are included with the overall costs of packaging materials and containers.[1]

Consumer advertising appears to be the main method of promotion used by food processors. Advertising expenditures (*excluding* co-operative allowances in most cases) ranged from one-third to three-quarters of the total promotional budgets of the larger processors. Newspaper advertising receives the greatest allocation of the advertising budget; television advertising is also important. Typically, firms spent between one-third and two-thirds of their advertising budget on newspaper advertising. Some of the larger firms in the dairy products, meat packing, flour milling, fruits and vegetable processing, and breakfast foods industries indicated that their 1957 television billings accounted for one-third to two-thirds of their total advertising budget. One large firm in the breakfast foods industry placed 56% of its advertising in magazines, and a bakery firm spent 41% in radio advertising.

Developments in the Major Fields of Food Processing

We describe the changes in each of the major food processing fields in this section. To indicate the relative importance of the various fields, we have included Table 8 which gives the selling value of shipments in each field in 1957.

In *meat packing,* the degree of concentration of firms was already relatively high, with 70% of the output controlled by five firms in 1948. By 1956, four firms—Canada Packers, Swift's, Burns and Schneider—produced 71% of the output (in 1955, Canada Packers acquired Wilsil's and Calgary Packers, and Burns acquired Modern Packers).[2] The effect of the increased concentration of buying by distributors has resulted in a shift to a smaller, more highly skilled sales staff in place of a larger number of less skilled sales personnel. Evidence presented at the hearings by representatives of meat packing companies[3] suggested that the cost of the shift to the more highly skilled sales staff had, to a considerable extent, offset the economies of the smaller number of sales personnel

1 We discuss these costs in Part IV.

2 The meat packing industry is at present the subject of an inquiry under the Combines Investigation Act.

3 See *Proceedings,* p. 3858, testimony of Mr. R. S. Munn, President of Burns and Company. Mr. McLean of Canada Packers also referred to the fact that their sales procedures required some modification as far as the chain store organizations were concerned (*Proceedings,* pp. 4116-7).

required. Shifts in population in relation to areas of meat production have resulted in an increase in the amount of transportation required to get a unit of product to the consumer. Other changes affecting meat packing include a tendency towards higher relative prices for the better cuts, occasioned by the increase in aggregate demand, and a shift in cured meats to shorter and milder curing. These product changes have, however, had little overall effect on the structure of the meat packing industry. Firms primarily engaged in meat packing may of course be influenced by factors affecting the demand for fertilizers. animal feeds and other by-products which they also produce.

Table 8—Selling Value of Factory Shipments, by Groups in the Food Processing Industry, 1957

Group	$ Million	Per Cent
Meat Products	947	32.0
Dairy Products[a]	602	20.3
Biscuits	78	2.6
Bread and Other Bakery Products	331	11.2
Flour Mills	204	6.9
Fruit and Vegetable Preparations	265	9.0
Sugar Refineries	155	5.2
Prepared Breakfast Foods	33	1.1
Macaroni and Kindred Products[b]	13	.4
Miscellaneous Food Preparations	336	11.3
Total Food Processing[c]	2,964	100.0

[a] In addition, the selling value of shipments from milk pasteurization plants totalled $139 million.

[b] We have not dealt with this group in the text. One of the main food processing firms in this group is Catelli.

[c] Excluding Fish Processing, with selling value of shipments of $171 million.

SOURCE: Reports of industry sub-groups in the Foods and Beverages Industry, Industry and Merchandising Division, Dominion Bureau of Statistics.

In the *dairy products industry*, where the primary product may be used in a variety of ways, the nature of the changes that have taken place varies greatly. The production of processed dairy products has been affected to a considerable extent by government activity, with butter, cheese and concentrated milk products all having been under price support at one time or another during the past 10 years. In most years a considerable amount of butter storage has been performed on the government's account. The number of firms engaged in the production of butter and cheese is large but there has been a great deal of consolidation in recent years. The 30 largest firms produced 32% of the output in 1948 and 45% in 1956. The co-operative form of organization is particularly important in the processing of butter, cheese and powdered milk. In the processing of dairy products as a whole, 27% of the output was produced in co-operative plants in 1956. In two of the sub-groups within the dairy products industry —condensed milk and processed cheese—the degree of concentration is relatively high. In 1948, six firms handled 62% of the output of condensed milk, and in 1956, four firms, including Carnation and Bordens, produced 59%. For processed cheese, there was an increase during this period from five firms producing 81% to four firms producing 87%, of which Kraft is much the largest. Bordens, Kraft, and Carnation are subsidiaries of United States firms. In the

production of processed cheese, there is considerable stress on product differentiation and promotional activities in support of the various brands. In the submission of Kraft Foods to the Commission,[1] it was indicated that they had spent large sums of money in advertising and promotional activities.

In the distribution of fluid milk, which is not included as part of food processing, the situation varies from area to area. In general, there is a considerable degree of regulation by provincial governments and changes have taken place slowly with a considerable shift from home to store delivery, reduction in the frequency of home deliveries, and the increased use of paper cartons having been the main changes. In the evidence presented at the public hearings, this field was presented to the Commission by a number of interested farm groups as a model one because the price spread had not increased as much as in other fields[2] but at the same time it was the target for many of the criticisms of consumers.[3] We report on our study of the price spread for fluid milk in Part V.

Firms producing *bread and other bakery products* have experienced a number of problems during recent years. With the main product being one for which there has been relatively little possibility of extending the market, these firms have had less scope than others in the food industry in adjusting to changing circumstances. Bakery products other than bread have, however, become an increasingly important factor. There has been a considerable shift to fewer and larger plants with new and more highly mechanized bakery equipment. This trend has resulted in more transportation in relation to the quantity of product handled. The bakeries during this period have also shifted in their route distribution from horse-drawn vehicles to trucks. With bread being a "traffic" item in the supermarket and distributors' private brands being priced considerably below the route prices, there has been some decline in the proportion of bread handled on home delivery routes. There was little, if any, increase in the proportion of the bakery business done by the main firms—from five firms with 33% in 1948 to six firms with 37% in 1956. The major firms include Canada Bread, Canadian Bakeries and Eastern Bakeries (subsidiaries of Maple Leaf Milling), Weston Bakeries (a subsidiary of George Weston Ltd.), Consolidated Bakeries (which includes Wonder Bakeries and other subsidiaries), General Bakeries, McGavin's, and Inter-City Baking Co. (a subsidiary of Lake of the Woods Milling). The fact that there are corporate links between flour mills and bakeries may well affect the pricing of products. Even if a baking firm which is a subsidiary of a flour milling company buys from its parent company when prices are the same as those offered by other companies,[4] this preference may have a general downward effect on the overall pricing of flour because it narrows the market for other flour milling companies.

The *flour milling industry* in Canada has been influenced primarily by the wheat-surplus problem. (This industry, which was already quite highly mechanized in 1949, now has considerable idle capacity.) Difficulties of selling in foreign markets in recent years have been accentuated by the export subsidy program of

[1] *Proceedings,* p. 4597.

[2] See, for example, the submission of the Saskatchewan Farmers' Union, *Proceedings,* p. 1400.

[3] See, for example, the submission of the Nova Scotia Branch of the Canadian Association of Consumers, *Proceedings,* p. 2155: "We are convinced, however, that the present system of distributing milk is inefficient and costly."

[4] Mr. Ross of Canada Bread suggested that this was the practice. *Proceedings,* p. 2477.

the United States and the development of flour mills abroad. As with some of the other areas of food processing, firms in the flour milling industry engage in other activities such as the production of animal feeds. There was a sharp increase in the degree of concentration in this industry in Canada from 1948, when three firms did 32% of the business, to 1956 when four firms did 80%. These four firms are Maple Leaf Milling (including Purity Flour Mills, which has been a subsidiary since 1952), Robin Hood Flour Mills (a subsidiary of International Milling Co., an American company), Ogilvie Flour Mills, and Lake of the Woods Milling (controlled since 1954 by Ogilvie). We have referred to the fact that a number of bakery firms are controlled by these flour milling companies; some of these companies also own terminal and country grain elevators. The Flour Milling industry is influenced considerably by the operations of the Canadian Wheat Board, both in buying its raw materials and in selling its final product, the selling price of which is affected by wheat prices. The Canadian per capita consumption of the main product—flour—has not been increasing, and the range of products sold has not increased as it has in some other fields. One of the few new product developments has been prepared cake mixes.

The *fruit and vegetable processing industry* is one of contrasts. The large firm has been able to adjust relatively quickly to the increased variety of products and has taken the initiative in developing new products. For the larger firms, a decline in seasonality of operations has been occasioned by the wider variety, and this development has been assisted by bulk preserving which provides raw material for the firm to draw on in the off-season. The small seasonal canning company with a limited number of lines has found it much more difficult to adjust and such firms have generally been left behind in the development of a whole line of new products such as baby foods, frozen foods, sauces, etc. In some instances, however, small firms have had profitable operations in specialized lines for which markets were expanding. As most of the products of this industry are sold under processors' brands, national advertising and other forms of promotion play a significant role, with the large firms having advantages. Promotional expenses increased in relation to sales between 1949 and 1957, and by 1957 ranged from 3.4% to 7.1% of sales for the four major firms. For all firms in this industry, the holding of inventories has increased as the distributors have shifted this function back to the processor. The proportion of the output produced by the larger firms did not increase between 1948 and 1956; in the earlier year three firms produced 40% of the output, and in 1956 four firms produced 43%. These four firms are Canadian Canners, Heinz, Campbell Soups and Libby's (all subsidiaries of or controlled by United States-based firms). Some of the other firms in the field include W. Clark, Green Giant of Canada (controlled by Salada-Shirriff-Horsey since 1956), Stokely-Van Camp of Canada, David Lord and Alphonse Raymond.

Changes in the *sugar refining industry* have not been great in recent years. A highly standardized product is produced with relatively few firms engaged. There are four in beet sugar refining at present—Canada and Dominion Sugar, Quebec Sugar Refinery, Canadian Sugar Factories and Manitoba Sugar Company. The last two companies were controlled by the British Columbia Sugar Refining Company. Control of the Manitoba Sugar Company was acquired in April, 1955; in 1957 the Restrictive Trade Practices Commission concluded that the public interest would

be best served if Manitoba Sugar operated as an independent company. Sugar beets are grown on contract with farmers[1] and the product is sold in a market where prices are influenced primarily by the price of imported sugar.

In the industries processing food products of agricultural origin the total product of the *prepared breakfast foods* industry is less than any of the industries referred to above. In this industry (which is dominated by subsidiaries of United States corporations) in 1948 three companies produced 92% of the output, and by 1956 the same number of companies produced 87%. The main firm in this field is Kellogg's. Until recent years Nabisco and Quaker Oats were the main other firms of significant size engaged in the production of prepared breakfast foods in Canada, followed by General Foods. General Mills began activities in Canada during the '50's. With consumers allotting a relatively small part of their food expenditures to prepared breakfast foods, there has been considerable scope for the creation of demand by promotional activities. With the development of markets for new products, firms in this industry have been able to avoid some of their previous problems of seasonal operations. It is also interesting to note that several of the companies in this industry have extended operations into the expanding pet food lines. These companies have engaged in many of the merchandising activities with which consumers' groups expressed displeasure at the public hearings—coupon offers, in-package premiums, advertising directed to children, etc., and a generally high level of advertising which increased during the period. Promotional expenses ranged from 13.4% to 20.2% of sales in 1957 for the major firms engaged in the production of prepared breakfast foods. While we stress the promotional activities of these firms, it should be noted that they are alert to the changing structure of food marketing. They have shifted to local warehousing when the greater variety called for this to provide efficient servicing of distributors, and they have watched the shelf life of their products closely by coding packages.

We have noted that the extent of participation *by co-operative organizations* in the processing of cheese, butter and powdered milk is considerable. It is greater in this field than in food processing as a whole, where the overall degree of processing done by co-operatives averages between 7% and 8% of the total. The proportion has remained about the same during the past 10 years.

3. Assembling

There are a number of agencies of varying types which have the common function of assembling primary products. In addition, they may transport and store the products and perform other functions.

In 1951, the Census of Distribution recorded 6,664 establishments handling farm products to the value of $1.3 billion. Grain elevators and buyers were the largest group with about one-half of the total volume of sales of all assemblers handled through 5,314 establishments. All of the grain elevators are owned either by grain producers' co-operatives or by large private elevator companies. In 1957 the United Grain Growers and the Manitoba, Saskatchewan and Alberta pools operated 2,622 of the 5,343 elevators; these 2,622 elevators had a capacity of 198 million out of a total of 380 million bushels. The remainder of the capacity

[1] We refer in Part V to the particular type of this contractual arrangement.

was operated by non-co-operatives, with the major companies being Searle Grain Co. (462 elevators), Federal Grain Ltd. (454) and its subsidiary, Alberta Pacific Grain Co. (331), Pioneer Grain Company (439), and National Grain Co. (324). Ogilvie Flour Mills operated 128 country elevators and 98 were owned by its subsidiary, Lake of the Woods Milling Co.

Other large groups of assemblers were those handling livestock, poultry products and fruits and vegetables. Livestock assemblers (410 establishments in 1951) reported sales totalling $380 million. Poultry product establishments (416) reported a total volume of sales of $70 million. Fruit and vegetable establishments (398) had total sales of $102 million.

Co-operatives[1]

In its submission to the Commission at the public hearings, the Co-operative Union of Canada included a definition of co-operative enterprise as follows:[2]

> "One of the best definitions of co-operative enterprise is found in Chapter 3 of the *Report of the Enquiry on Co-operative Enterprise in Europe, 1937,* issued by the Government of the U.S.A. It reads as follows:
>
> > 'A co-operative enterprise is one which belongs to the people who use its services, the control of which rests equally with all the members, and the gains of which are distributed to the members in proportion to the use they make of its services.'
>
> In practice, co-operatives follow certain well-accepted principles, of which the following are fundamental: open membership; one member, one vote; limited return on capital; and surplus distributed in proportion to patronage. Methods of operation ordinarily include provision for promotional or educational work, cash trading is favoured, and goods are handled at regular market prices."

Co-operatives have for many years been particularly important in the marketing of agricultural products at the point of first sale. It is at this point that the assembly function is carried out. In 1951 co-operatives performed 36% of the assembling of commodities other than grain and approximately 50% for this latter commodity. Taking into account the relative magnitudes for grain and other products, the overall proportion of assembling done by co-operatives in 1951 was 43%. The importance of the co-operative form of business operation at this level, and the lesser importance at the processing (7%) and retailing level (2%), is associated with the fact that the co-operative movement in Canada has drawn its strength from farmers and other primary producers in contrast to some other countries where the participation of consumers of finished products has been much greater. We have noted that in particular fields of processing the proportion is as high as 27%; the proportion is also much higher than the national average in particular regions. The difference in relative importance of co-operatives at the various levels is occasioned to some extent by the varying

[1] For a more extensive discussion of "The Role of Co-operatives in Canadian Food Marketing", see Volume III.

[2] *Proceedings* p. 4152.

financial requirements of business, with the performance of the assembly function requiring lesser amounts of capital than some of the other stages of marketing.

The interest of the Commission in the role of co-operatives stems from the particular significance that the co-operative form of organization may have in performing alongside of other forms of business enterprise and operating as a check on the possibility of excessive price spreads. One of the factors in the participation of co-operatives is that the patronage dividends which are paid either to producers of food commodities or to consumers of food products alter the effective prices and thereby result in reduced price spreads.

For the period since 1951, information is not available on the proportion of the business of assemblers done by co-operatives. However, the data collected by the Economics Division of the Department of Agriculture indicate that the sales of "marketing" co-operatives have increased to about the same extent that the cash income from the sale of farm products has increased. This suggests that the proportion of the business of assemblers done by co-operatives has not changed greatly.[1]

Marketing Boards[2]

There have been other changes at the farm end of the marketing system for food products, the most noteworthy in recent years being the development of producer marketing boards.[3] The essential feature of the board method of marketing is that, where the majority of the producers of a commodity desire to market their product collectively, the minority may be compelled by law to fall in line with the wishes of the majority. Boards have been established under provincial legislation and have been an important factor in recent years in the marketing of a number of food products. There are three kinds of producer boards operating in the provinces of Canada. The simplest is the negotiating committee type which negotiates the minimum price to be received by the farm producer for his products. The second is a negotiating-agency board which both negotiates price and handles payments but does not handle the crop. The third is the central selling agency type which has an agency appointed to control and market the product, though it may not take ownership in any physical sense at any stage in marketing. Among the producer marketing boards are the British Columbia Fruit Board, which in 1939 designated B. C. Tree Fruits as its sole selling agency,[4] and the British Columbia Coast Vegetable Board, which were established prior to the war. Since the war, and particularly in the '50's, there has been increased use made of such boards. In Ontario, a large number of negotiating boards have been established for fruit and vegetable products and dairy products, with farmers and processors both represented on the boards. A few boards have also been established which operate through a central selling agency, one of which

1 In "marketing" co-operatives are included those that are engaged in processing for which we have separate information from the Dominion Bureau of Statistics which has been referred to under "Processing".

2 For a more extensive discussion of "The Role of Marketing Boards in Canadian Food Marketing", see Volume III.

3 Many of the submissions at the public hearings of the Commission dealt with particular aspects of these boards' operations.

4 *Royal Commission on the Tree Fruit Industry of British Columbia,* p. 491.

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is the Ontario Hog Marketing Board. Legislation exists in other provinces as well for the establishment of producer marketing boards, and a number have already been established.[1]

While the co-operatives have voluntary membership, the sale of products through marketing boards is compulsory, provided that a stipulated proportion of the producers (in some cases, producing a stipulated proportion of the product) vote for establishment of a board. The marketing boards may, however, use co-operatives as their selling agencies, and in many cases have sold through existing co-operatives or have established agencies under co-operative legislation for the purposes of handling their products.

By far the widest variety of control methods has been used in the case of the British Columbia marketing boards. This is particularly true of the Fruit Board which has controlled such matters as the time and place of marketing, the quantity and quality of the product marketed, the per cent marketed in fresh and various processed forms, and the nature of the containers used. It has also undertaken extensive research, sought to expand demand through advertising, and performed processing and brokerage functions. The Fruit Board has sought to raise producer prices through regulating the flow to market, employing specialized and well-informed salesmen and practising price differentiation. In short, it has made the fullest use of controlled marketing legislation of any board in Canada.

The general practice of the Board is to sell to British Columbia and Alberta buyers at higher prices than those charged buyers in other provinces. There seems no reason to believe, however, that any such price differences have been more pronounced since 1950 than in the immediately preceding years. Indeed it seems likely that they have become considerably less in more recent years.

While we have not been able to assemble conclusive evidence of the effect of the action of marketing boards in general on producer prices, in the few instances where the Board has control over the supply and distribution between domestic and foreign markets, it seems evident that there has been an increase in the domestic price to producers. As to the effect of marketing boards on price spreads, it should be noted that marketing boards have not been established for the specific purpose of narrowing price spreads. Because of the great variety of factors operating at any one time, we have not been able to ascertain whether or not there has been any narrowing or widening of price spreads as a result of board activity.

In addition to producer marketing boards, there are the milk boards, established under provincial legislation, which operate in most provinces. In general, however, these operate almost as public utilities, setting prices to farmers and, sometimes, margins and prices to consumers. These have been in existence throughout the period since the '30's.

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[1] The development is summarized by L. E. Poetschke and Wm. Mackenzie, *The Development of Producer Marketing Boards in Canadian Agriculture,* University of Alberta, 1956.

4. Government Price Supports

During the public hearings, representatives of some producer organizations suggested a relationship between narrow price spreads and government price supports.[1]

We have examined the effects of government price support operations on price spreads for a number of commodities. In the case of butter, which has been under a program of price support throughout the 10 years, the Agricultural Stabilization Board and its predecessor, the Agricultural Prices Support Board, began placing butter in storage as soon as the open market price got down to the guaranteed minimum or floor level, and continued storing until it rose above that level, thus raising prices. The Board then resold its butter to the trade in periods when prices were above the guaranteed minimum level, thus reducing prices at that time. In the program of price support for butter, there have been a number of factors that have tended to widen the price spread. These include: the lengthening of the storage period for butter, additional costs involved in meeting the Board's buying specifications, the effect of Board activity in limiting gains in efficiency in the processing of butter, and the effect of price supports in increasing the supply of butter and thereby resulting in a tendency to pull farm prices down. There have also been a number of factors in the price support program for butter that have tended to narrow the spread. These include: the bearing of a portion of the marketing costs by the government (there have been only one or two brief periods during the past 10 years during which the Board's selling price more than covered its cost plus carrying charges); and the impeding of changes in the product as well as in packaging, promotional and other activities associated with the participation of the Board in butter marketing. In the case of butter, which has been subject to substantial support over the 10-year period, we conclude that support procedures have tended, on balance, to narrow the spread. An important factor outside of price supports which would have tended to keep the butter spread narrow is the availability of a lower-priced competitive product, margarine.

In the case of eggs, the participation of the government through price supports has been much more limited than in the case of butter. It is unlikely that the effect on the price spread for this commodity has been significant. For other commodities, including cheese, skimmed milk powder, apples, potatoes, cattle and hogs, price supports have been a factor during limited parts of the period only and could not have been an important factor in price spreads on these commodities in most years.

[1] For example, see the brief presented by the Saskatchewan Farmers' Union, *Proceedings,* pp. 1398-1410, and the answer to questions, pp. 1444, 1448.

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PART III

GROSS MARGINS AND RETURNS TO LABOUR AND CAPITAL IN FOOD PROCESSING AND DISTRIBUTION

CHAPTER 1

INTRODUCTION

1. The Relation of the Analysis of "Gross Margins" to the Study of Price Spreads

An analysis of gross margins is one way in which we can look at price spreads. The retailer, for example, buys quantities of food products and sells these quantities to consumers. The difference between the total amount he spends for materials and the total revenue he obtains from sales is a measure of the aggregate spread on all the units he handles. This difference is the retailer's gross margin.

In this part we discuss the operating results of various types of marketing firms, the changes from 1949 to 1957 in the spread looked at in this way ("gross margins") and the main components, viz., payments to firms in other sectors of the economy, earnings of employees, other operating expenses, net operating profit, and net profit before income taxes. In later sections of this part, we refer in greater detail to the changes in earnings of employees, corporate income taxes, and returns on investment. We consider these matters in this part because they can be dealt with conveniently by using data relevant to the analysis of gross margins.

2. "Gross Margins": An Accounting Measure

In the accounts of business firms, we have the expenditures of the firm on raw materials and the revenue from the sale of the products; the difference between these is the "gross margin". Gross margins can be obtained from the financial records of retailers, wholesalers, processors and assemblers, and, when these are available over a period of years, changes in gross margins can be observed.

The gross margin of any firm in any year is measured in dollars and relates to the total of all products handled. As most firms handle a variety of products, it is not possible from the accounting data to obtain a "spread" per unit of any one product expressed in dollars. The gross margin for a group of firms is usually expressed as a per cent of sales in order to obtain a yardstick for the measurement and also because the number of firms reporting usually varies. These ratios of gross margins as a per cent of sales can be compared from year to year. If the gross margin as a per cent of sales increases from year to year, this means that the cost of raw materials is a declining proportion of sales.

The financial records of the firm enable us to break down the gross margin into parts. We can, therefore, use these records to analyze the changes which have been occurring in the components of the gross margin. For example, it is possible to discover whether expenditures on salaries and wages, as a per cent of sales, have increased or decreased.

If it were possible to obtain the financial records of all firms at, say, the retail level of food marketing, we could determine the total gross margins for all retailers, i.e., the total difference between purchases of foods by retailers and total sales by them to consumers. We could also obtain an average gross margin or spread for all retail firms. Where this is not possible, the financial records of a sample of firms can show the range in gross margins between retailers. If the sample were representative of all retailers, the average gross margin for the group would be similar to that for all retailers. The same type of data could be obtained for the components of the gross margins.

There are difficulties in carrying through this kind of study from the financial records of firms. Rarely are the financial records of all firms available; accounting procedures, although considerably standardized, do differ between firms, and result in some lack of comparability; firms frequently engage in activities other than the handling of food products, and it is difficult or impossible to eliminate these items from the accounts. The difficulties notwithstanding, the analysis of gross margins from accounting records does throw light on the spread and on changes occurring over a period of years.[1]

We will deal with gross margins as a per cent of sales. We are concerned with price spreads looked at in this way because the business community and others watch changes in these gross margins and are concerned with what lies behind the changes they observe.[2] The changes in gross margins expressed as a per cent of sales have little meaning by themselves but they are for many a convenient vehicle for analyzing the effects of changes in value of sales, costs of raw materials and changes within business firms.

3. The Components of Gross Margins, From Financial Records

The Dominion Bureau of Statistics *Operating Results* of chain food stores, independent food stores and food wholesalers provide a gross margin as a per cent of sales, and also provide a breakdown of the various components of this margin in considerable detail. A breakdown can be obtained from the D.B.S. reports on the food processing industry, but information is not available for many of the expense items. The components in these breakdowns include the following.

Payments to Firms in Other Sectors of the Economy

Firms in food marketing buy from other firms goods and services required in the marketing of the food products which they handle. Grouping expenses into such a category as this is arbitrary and can only be done with those expenses

[1] The Dominion Bureau of Statistics, in its studies of operating results of food retailers and wholesalers, obtains information by a questionnaire sent to a sample of firms.

[2] See, for example, the November 22, 1958, issue of *Canadian Grocer* and the question on the cover: "The chains: What's Behind the Mounting Gross Margins"?

which are reasonably well defined. We include here such items as real estate taxes, licences, insurance, supplies (other than raw materials), advertising, travelling, communication and delivery. We group these payments to other firms because the price of these goods and services is largely determined in the economy at large.

Earnings of Employees

This represents the payment of salaries and wages and employees' benefits by the firms to their own employees. It is a much more specific expense than some of the other groupings of expenses.

Other Operating Expenses

In conducting business, firms incur other operating expenses which we group under the heading, "Other Operating Expenses". We include here the items for occupancy, repairs and maintenance, depreciation, bad debt loss, and all other expenses. As with the first category, this is an arbitrary grouping and will obviously include a number of payments that are made to firms in other sectors.

Net Operating Profit

The above three categories make up the total operating expenses, which, when deducted from the gross margin, give the net operating profit. (In the case of individual proprietorships, this is the last step we can take. For these businesses we obtain at this point the net operating profit before deduction of proprietors' salaries and income tax.)

Non-Trading Income and Expenses

The firms may have non-trading income in the form of interest earned, net revenue from rentals, financing charges, delivery charges made to customers and bad debts recovered, revenues from investments and other non-trading activities. The firms may also have non-trading expenses in the form of interest expenses and any other expenses not pertaining to the business.

Net Profit Before Income Tax

Taking the net operating profit, adding non-trading income and deducting non-trading expenses, we obtain the overall net profit before income tax. (If we consider this in relation to investment, we obtain the rate of return on investment before taxes.)

Corporate Income Taxes

We are concerned here with corporate income tax payments, as they are a component of price spreads whether they are measured by gross margins or in some other manner.

Net Profit after Taxes

This is the overall net profit after deduction of corporate income taxes. (If we consider this in relation to investment, we obtain the rate of return on investment after taxes.)

4. The Sources of Information on Gross Margins and Components

The Dominion Bureau of Statistics publishes every second year (the even-numbered years) *Operating Results and Financial Structure of Retail Food Stores (Independent)* and also (in the odd numbered years) *Operating Results of Chain Food Stores* and *Operating Results of Food Wholesalers.* These reports cover a sample of firms in each group, with a breakdown in sufficient detail to set out most of the items referred to in the previous section, at least down as far as net operating profit.

For food processing, reports are published each year by the Dominion Bureau of Statistics on the Foods and Beverages Industry, with separate reports on the various sub-groups in this industry. In each of these reports, a summary table contains the following aggregate estimates for the industry or sub-group: salaries and wages; cost of fuel and electricity; cost at plant of materials used; and selling value of factory shipments. From the cost of materials, it is possible to extract the cost of packaging materials and containers. These data enable the computation of a measure along the same lines as the "gross margin" presented for food retailing and wholesaling, and a breakdown into certain of the components; the breakdown is not comparable, however, to that for firms engaged in food distribution.

In addition to these data, the Commission received returns from questionnaires sent to over one hundred firms engaged in food processing and distribution. Financial returns from these firms covered the period from 1949 to 1957. These returns were useful in supplementing the estimates of gross margins obtained from D.B.S. data and in providing additional detail on particular types of expenses. These returns also provided additional information on corporate income tax payments and net profits after taxes. From this information, rates of return on investment before and after taxes were obtained.

In using data from both of the above sources, there are difficulties arising from the lack of comparability between the categories of expenses listed by different firms. This sets limits on the degree to which analysis of particular expenses can be pursued. Also, in grouping firms, the dissimilarities of their businesses may reduce the value of the resultant estimates.

There are certain types of firms for which it is difficult to obtain data because of the nature of their operations. For example, the Commission did not attempt to obtain additional data to that obtained by the Dominion Bureau of Statistics on independent retailers. And neither the Commission nor the Dominion Bureau of Statistics has available information on operating results of assemblers of primary products, agents or brokers.

CHAPTER 2

GROSS MARGINS AND COMPONENTS, 1948 TO 1957

1. Gross Margins: 1948 to 1957

Retailers

Gross margins in food retailing have averaged around 15% to 20% of retail sales. They are relatively low for grocery stores, higher for combination stores and highest for meat and fruit and vegetable stores. The margins for combination stores are higher than for grocery stores because of the inclusion of meats. Similarly, the higher margins in meat and fruit and vegetable stores are occasioned by the fact that they specialize in products that are relatively perishable. (Table 9.)

Gross margins for chain stores have been 1% to 2% of sales above those for independent stores of similar type except for meat stores where the difference was slight. These higher margins in the chains are mainly a result of the fact that they buy further back in the marketing stream and perform their own wholesaling. In the case of meat stores, where the difference was slight, the addition of the wholesaling function has less effect because in neither the chains nor the independents does the meat move into and out of a wholesale warehouse, but in most cases comes directly from the packing plant to the individual retail outlet.

During the period from 1949 to 1957,[1] there were a number of changes in retailers' gross margins as a per cent of sales. There was little increase until 1951 or 1952. Since then margins have tended to increase for all categories. For the combination stores, both chain and independent, which in 1951 accounted for well over one-half of the sales of all food stores, gross margins have increased throughout the period, with the increase being greater for the chains. The increased handling of non-foods in combination stores, with their attendant higher markups, is a factor in the increasing gross margins.

Wholesalers

The gross margins of wholesalers as a per cent of sales at wholesale are considerably lower than those of retailers, and the differences would be even greater if the gross margins were expressed in relation to sales at retail. Within wholesaling the gross margin for fruit and vegetable wholesalers is considerably greater than for grocery wholesalers. The greater degree of perishability and handling of the products of the former group accounts for a large part of this difference. (Table 9.)

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[1] 1948 to 1956 in the case of independent stores.

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Table 9—"Gross Margins", Food Retailing and Wholesaling

Group	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
						Per Cent of Sales				
Retailers[a]										
Chain Combination Stores[b]		15.6		15.8		16.5		16.5		17.4
Chain Grocery Stores		16.0		15.5		15.0		16.0		15.0
Chain Meat Stores		17.6		15.8		n.a.[c]		18.8		20.2
Independent Combination Stores	14.6		14.9		14.5		15.1		15.4	
Independent Grocery Stores	14.0		14.4		13.9		14.4		14.8	
Independent Meat Markets	16.6		16.1		17.8		18.9		19.6	
Independent Fruit and Vegetable Stores	17.5		17.5		17.7		18.4		19.4	
Wholesalers[a]										
Grocery Wholesalers		7.7		8.0		7.7		7.2		6.8
Fruit and Vegetable Wholesalers		10.6		11.3		11.8		11.5		12.1

[a]We have shown here the results for all of the firms reporting. For the independent retail stores and the wholesalers, the results are affected to some extent by the fact that different firms report in different years, but the general trend is not distorted.

[b]These are the average results for chain combination organizations of all sizes. The changes differ for firms in different size groups: for those with sales under $10 million, gross margins have not increased over the period; all of the increase has been accounted for by the firms with sales of $10 million or over.

[c]n.a. = not available.

SOURCE: D.B.S. *Operating Results.*

Gross margins of grocery wholesalers, by far the largest group according to sales volume, declined during the period from 1949 to 1957, while gross margins of fruit and vegetable wholesalers increased somewhat.[1]

Processors

Information on firms engaged in food processing is published annually by the Dominion Bureau of Statistics in the reports on the Foods and Beverages Industry. We are concerned here only with firms that process food products of agricultural origin. Thus, from the Foods and Beverages Industry, we exclude for the treatment in this part the information on fish processing as well as on beverages, animal feeds and confectionery.

Firms engaged in food processing purchase agricultural raw materials and sell food and other products obtained as by-products. These firms may also process other products. Also, some of the raw materials are imported and some of the processed products are exported. However, the main activity of most of the firms in this industry is directed towards processing Canadian food products for use in domestic consumption. Therefore, gross margins in the food industry as defined above, and in the various sub-groups, are of considerable assistance in interpreting price spreads.

[1] If we take the gross margin of the grocery wholesaler, with the appropriate adjustment for the different level of selling prices, and combine it with the gross margin of the independent combination store, we obtain an overall gross margin of 21.1% of sales in both 1949 and 1957. In the case of the chain combination store, which we discussed earlier, the gross margin increased from 15.6% of sales in 1949 to 17.4% in 1957.

Similar changes took place in the period from 1924 to 1930, an earlier period when chain food stores increased their relative share of the retail food business. Their gross margins increased from 18.2% in 1924 to 19.1% in 1930, while those for the wholesaler-retailer system declined from 30% to 26%. (*Report of the Royal Commission on Price Spreads,* 1935, p. 217.)

The gross margins were obtained by taking the difference between the cost at plant of raw materials[1] and the selling value of factory shipments, and stating this as a per cent of sales.

The results in Table 10 indicate that the gross margins for the food processing industry are considerably greater than retailers' and wholesalers' margins; however, it should be noted that the margins are expressed as a per cent of sales at the processors' level.

For the food processing industry as a whole, the gross margin ranged from 30% to 37% of sales during the period 1949 to 1957. However, there was a great variation between the sub-groups, with the range from 66% to 76% for the breakfast foods industry, from 16% to 26% for the slaughtering and meat packing industry. There are a number of products, such as fresh produce, eggs and milk for fluid consumption, that do not undergo processing to any great extent; firms engaged in handling these commodities are not included in the food processing industry.[2]

Table 10—"Gross Margins",[a] Food Processing

Industry	1949	1950	1951	1952	1953	1954	1955	1956	1957
					Per Cent of Sales				
Foods and Beverages Industry[b]	30.4	30.7	30.2	34.1	35.0	35.7	37.4	36.8	36.6
Meat Products	18.1	17.0	16.2	21.9	21.7	22.7	25.8	24.4	23.9
Dairy Products	27.5	29.6	28.2	30.2	30.7	31.2	31.4	31.7	29.6
Bakery Products	53.1	52.2	53.0	55.5	56.2	55.5	56.1	54.5	55.2
Four Mills	16.9	19.7	20.8	20.3	21.2	22.1	23.0	22.0	23.8
Fruit and Vegetable Preparations	63.3	63.5	63.7	65.8	64.8	63.5	64.1	63.6	61.1
Sugar Refineries	27.0	27.9	26.3	32.0	37.3	36.2	31.7	28.2	31.3
Breakfast Foods	66.0	67.7	67.4	70.7	73.6	75.4	76.5	74.9	73.1

[a] The "gross margin" was obtained by taking the cost at plant of materials used (excluding packaging materials and containers) as a per cent of selling value of factory shipments, the residual being the gross margin. To the extent that materials other than raw materials are included, this procedure results in an understatement of the gross margin.

[b] Excluding beverages, animal feeds, confectionery and fish processing.

SOURCE: Computed from D.B.S. reports on the Foods and Beverages industry.

During the period from 1949 to 1957, gross margins in the food processing industry increased from 30.4% to 36.6% of sales, with the sharpest increase taking place in 1952. (Another way of stating this is to say that the cost at plant of raw materials as a per cent of sales declined from 69.6% to 63.4%.) Part of this increase was occasioned by shifts in relative prices (which we discussed in Part I). There have also been a number of shifts towards increased processing of foods these have been referred to as increased built-in maid service.

1 From the cost at plant of materials used, only the cost of packaging materials and containers was deducted. To the extent that items other than raw materials remain in the materials figure, this procedure results in an over-estimate of the cost of raw materials and an understatement of the "gross margin".

2 The Dominion Bureau of Statistics included data on fluid milk distribution in its 1957 report on the Dairy Products Industry.

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The sharp increase in gross margins in 1952 was centred in the principal processing field—slaughtering and meat packing. The other areas where gross margins increased considerably over the period from 1949 to 1957 were flour mills and breakfast foods; in these the increases were spread over the period.

Summary

Over the period 1949 to 1957, retailers' gross margins increased, with the greatest increase occurring in chain store margins. Margins of grocery wholesalers, the main wholesale group, declined as a per cent of sales, and margins of processors increased considerably. As a result, there has been a general increase in overall gross margins.[1]

2. Components of Gross Margins: 1948 to 1957

We have dealt in the previous sections with gross margins for food retailers, wholesalers and processors. These gross margins, as a per cent of sales, have been used by many as a point of departure for the consideration of changes in food marketing. As we have indicated, they do serve to focus attention on the effects of changes, such as shifts in functions or the increased degree of processing of food products.

We might also consider the various components of gross margins in relation to sales or as porportions of the gross margins. These approaches were implied in several of the submissions received by the Commission at its public hearings. For example, we have the following two references:

> "For wages and salaries to have contributed to the price spreads of food products, it follows that they would have had to increase their proportion relative to sales. Table 9 (below) shows that this has not been the case. Wages and salaries have remained relatively constant over the period 1946 to 1956, and in the last three years were slightly lower than the average for the entire period." [2]
>
> "Figures derived from Taxation Statistics published by the Department of National Revenue show that the profits (after taxes) of all fully tabulated companies rose from 4.1 per cent gross sales or revenues for 1949 to 5.1 per cent in 1950, and dropped to 3.3 per cent in 1955 (the latest year for which such figures are available).
>
> In the light of the current squeeze on profits, it becomes obvious that cost increases, including taxes, must of necessity be reflected in higher prices. The sole alternative is a loss of profit which, if continued, leads to eventual bankruptcy." [3]

We believe that any such consideration of the components of gross margins is of limited use because of the difficulty in interpreting the changes observed.

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[1] Taking the gross margins of the processor-chain combination store and combining these as a per cent of retail sales, the increase has been from 41% in 1949 to 48% in 1957. Taking the processor-grocery wholesaler-independent combination store, the increase has been from 45% to 50%. See also footnote 1, p. 88.

[2] Submission of the Canadian Congress of Labour, *Proceedings*, p. 3895.

[3] Submission of the Executive Council of the Canadian Chamber of Commerce, *Proceedings*, p. 4629.

While we do not consider the analysis of the changing components of gross margins as a fruitful approach for dealing with the causes of changing costs in food marketing, we do find it helpful to look at the relative magnitude of the various components in order to understand the impact of changes in wage rates and rates of return on investment with which we will deal later in this part of the report.

We have set out in Tables 11 and 12 the gross margins in 1957 for chain and independent combination stores, grocery wholesalers and various groups of food processors, and also the components expressed as a per cent of gross margins for the years 1949 to 1957.

Table 11—Components as Proportions of Gross Margins, Food Retailing and Wholesaling 1949 and 1957[a]

Group	Gross Margins as a Per Cent of Sales		Per Cent of Margin 1949			Per Cent of Margin 1957		
	1949	1957	Earnings of Employees	Other Expenses	"Profit"[b]	Earnings of Employees	Other Expenses	"Profit"[b]
Chain Combination Stores	15.6	17.4	52.6	31.4	16.0	43.7	35.7	20.6
Independent Combination Stores	14.6	15.4	33.6	36.2	30.2	28.4	40.8	30.8
Grocery Wholesalers	7.7	6.8	54.5	37.7	7.8	55.9	36.8	7.3

[a] 1948 and 1956 for independent combination stores.

[b] "Profit" for the chain combination stores and grocery wholesalers is the "net operating profit", while for the independent combination stores it is the "net operating profit before deduction of proprietors' salaries and income tax".

SOURCE: D.B.S. *Operating Results* for chain and independent food stores and for food wholesalers.

Table 12—Components as Proportions of "Gross Margins", Food Processing, 1949 and 1957

Group	"Gross Margins" as a Per Cent of Sales		Per Cent of Margin 1949			Per Cent of Margin 1957		
	1949	1957	Salaries and Wages	Packaging Materials	Other Expenses and Net Operating Profit	Salaries and Wages	Packaging Materials	Other Expenses and Net Operating Profit
Foods and Beverages Industry[a]	30.4	36.6	36.3	17.8	45.9	37.2	20.0	42.8
Meat Products	18.1	23.9	41.9	10.3	47.8	44.9	11.0	44.1
Dairy Products	27.5	29.6	39.7	14.3	46.0	42.6	17.1	40.3
Bakery Products	53.1	55.2	47.8	3.6	48.6	51.2	4.9	43.9
Flour Mills	16.9	23.8	29.3	36.7	34.0	31.3	26.4	42.3
Fruit and Vegetable Preparations	63.3	61.1	25.3	37.0	37.7	26.9	43.3	29.8
Sugar Refineries	27.0	31.3	28.0	15.7	56.3	25.0	12.1	62.9
Breakfast Foods	66.0	73.1	21.0	20.0	59.0	21.0	19.4	59.6

[a] Excluding beverages, animal feeds, confectionery and fish processing.

SOURCE: Computed from D.B.S. reports on the Foods and Beverages industry.

It can be observed from the tables that firms engaged in food distribution have a higher proportion of their gross margins in the form of labour than the food processing firms as a group. (For the independent combination stores, part of the labour input is contained in the "profit" figure which includes the return to the individual proprietor.) Within the food processing group, there is considerable variation; the bakery products firms are relatively labour-intensive, while the breakfast foods firms are not.

With the breakdown provided in Tables 11 and 12, it is difficult to comment on what types of firms utilize relatively high amounts of capital in relation to labour.

In the food processing group, packaging materials and containers are shown as a separate item. The fruits and vegetables processing group has relatively high expenses for packaging materials, while these expenses are relatively low for the bakery products group.[1]

Between 1949 and 1957, there have been some changes in the proportion of gross margins represented by the various items. In retailing, earnings of employees now account for a smaller proportion of the margin. Other expenses and profits now account for a greater proportion. This shift is probably associated with the rapid development of the supermarket type of outlet which represents a substitution of capital for labour.

For the wholesaling and processing fields, it is difficult to draw any general conclusions as to changes from these data. In wholesaling, labour costs account for a slightly greater part of the margin. In processing, there is a light increase in most groups in the proportion accounted for by salaries and wages and, except for flour mills, sugar refineries and breakfast food firms, costs of packaging materials and containers account for a greater proportion of the gross margin.

[1] In spite of this, the submission of the National Council of the Baking Industry at the public hearings laid considerable stress on the increases in the cost of packaging materials.

CHAPTER 3

SALARIES AND WAGES, TAXES, AND RETURNS ON INVESTMENT

We have considered gross margins in relation to sales. This is a type of measure of price spread and as such we are interested in it. We have also noted certain shifts that have taken place in the components of gross margins. These shifts reflect the changes taking place in food marketing.

We are also interested in the rates of return and changes in these rates for wage earners and investors; we are, therefore, concerned with changes in wage rates and fringe benefits and with changes in rates of return on investment. We are also concerned with changes in corporate tax rates because investors receive only those returns remaining after these taxes are paid.

In considering rates of return to resources employed in food marketing, it should be observed that particular industries do not operate in isolation: they compete with other industries for supplies, labour and capital. The mobility of labour and capital is not such that there is at any time equivalence between prices paid for similar but not identical supplies, between wages of labour in alternative employment, or between returns to capital in different industries. However, the desire of suppliers to find and exploit the most promising outlets, the disposition of labour to compare earnings in other occupations, and the concern of investors to apply their capital to the most profitable enterprises all tend towards equivalence of the prices of close substitutes, the earnings of labour and the returns to capital.

We can take it that the prices paid by the food industries for such supplies as packaging materials and containers have moved up along with prices charged to other industries by the firms producing these materials. Our analysis of the earnings of labour in the food industries will disclose how closely the increase in earnings of labour in these industries has paralleled the changes in labour earnings in other occupations. Our analysis of the return to investment in the food industries will show whether returns to capital in these industries have advanced more or less rapidly than the returns to capital in other industries.

1. Salaries and Wages

In the preceding section, we have referred to earnings of employees in relation both to sales and to gross margins without analyzing the effect of various factors on labour costs. Here we are concerned with evaluating the effect of changes in wage rates, hours of work and other factors on labour costs.

Retailing

Most of the labour force engaged in food retailing, apart from the self-employed, receive payment in the form of wages. About 95% of chain store employees are hired on this basis; most of the remaining 5% who receive payment

in the form of salaries are employed in head offices. In 1957 the five major chains employed 32,000, of which over 31,000, were working in stores, warehouses and plants. Of these 31,000, a considerable number were employed on a part-time basis. The proportion that held part-time jobs was 41% in 1957, an increase from 33% in 1949; many of these were married women who worked as cashiers and in other jobs in supermarkets.

Salaries in food retailing, as in other fields, are difficult to define quantitatively. For independent retailers it is not possible to draw any clear distinction between salaries and returns from the investment in the business. For chain store organizations, salaries are supplemented by allowances and profit-sharing arrangements. In addition, salaries vary widely within each chain store organization. These factors, along with the fact that additional employees in salaried classifications have been added in recent years at the lower levels, render it impossible to draw any conclusions from increases in average salary levels for all salaried employees in a firm.

Wage rates in food retailing vary considerably because of the wide range in type of work. Retail organizations hire store managers, clerks for meat, grocery, produce and other departments, cashiers and other employees to work in the retail stores. In addition, chain store organizations hire employees for jobs in their warehouses and plants. For most of these employees wages are established on a weekly basis.

The replies to the Commission's questionnaire indicate that during the period from 1949 to 1957 weekly wage rates paid by chain store organizations have increased about 50% or at about the same rate as for retail trade as a whole and for food processing. Data collected by the Department of Labour indicate that in October, 1957, the average wages of grocery clerks ranged from $39.00 per week in St. John's to $69.00 in Vancouver and Victoria; for women cashiers, from $29.00 in St. John's to $55.00 in Victoria. The standard work week varied considerably, from an average of 49 hours in Quebec City to 40 hours in Winnipeg, Edmonton and Vancouver. Further details are provided in Table 13.

In a previous section we noted that, in food retailing, earnings of employees now account for a smaller proportion of the gross margin than in 1949. Increases in wage rates have been offset to a considerable extent by savings in the use of labour. These savings are particularly evident in the shift to a higher proportion of food being sold through self-service supermarkets. The change to supermarkets results in a substitution of capital for labour; in addition, part of the work is transferred to the customers who themselves pick out the food items from the shelves.

Wholesaling

We have little published information with which to evaluate the effect of such factors as changes in wage rates and hours of work on labour costs in food wholesaling. The Department of Labour publishes information on changes in average wage rates for all wholesole trade, of which food wholesaling is a component. This information indicates that weekly wage rates increased by 66% between 1949 and 1957, as compared with an increase of 49% for all retail trade. For food retailing, we noted that weekly wage rates have increased by about 50%.

Table 13—Average Standard Hours and Rates of Pay per Week in Food Retailing, October, 1957

Locality	Average Standard Hours per Week	Cashier Female	Grocery Clerk Male	Meat Cutter Male	Produce Clerk Male
	(hours)	($)	($)	($)	($)
Newfoundland					
St. John's	43.8	28.58	38.88	n.a.	n.a.
Nova Scotia					
Halifax	47.2	32.25	43.85	56.29	44.00
Quebec					
Quebec City	48.6	41.44	54.39	62.98	n.a.
Montreal	45.2	40.76	52.84	64.02	55.22
Ontario					
Ottawa	45.3	48.62	56.08	66.76	52.85
Toronto	44.5	51.08	61.79	69.21	56.16
Hamilton	44.7	46.06	59.41	71.77	58.11
London	45.1	50.72	65.09	68.34	55.38
Windsor	45.1	52.42	62.98	69.17	56.07
Manitoba					
Winnipeg	40.0	43.31	53.17	n.a.	n.a.
Saskatchewan					
Regina	40.9	43.11	51.95	62.37	n.a.
Alberta					
Calgary	40.1	41.18	60.06	68.60	65.27
Edmonton	40.0	48.60	n.a.	74.09	n.a.
British Columbia					
Vancouver	40.0	53.38	68.73	77.00	n.a.
Victoria	40.2	55.12	69.25	77.12	n.a.

n.a. = Not available.

SOURCE: *Wage Rates and Hours of Labour*, October, 1957, an annual publication of the Economics and Research Branch, Department of Labour, Ottawa. (Data on food retailing shown separately since October, 1956.)

The lower rate of increase in food retailing stems partly from the use of an increasing number of part-time workers in food retailing for whom the rates of pay are lower than for full-time workers.[1]

As we observed earlier, earnings of employees in food wholesaling accounted for a slightly greater proportion of the gross margin in 1957 than in 1949. While food wholesalers have made a number of changes in their operations that have resulted in savings in the use of labour, these have been less significant than in food retailing. One of the changes has been the institution by many wholesalers of cash-and-carry warehouses (with or without self-service) for the smaller retailers.

Processing

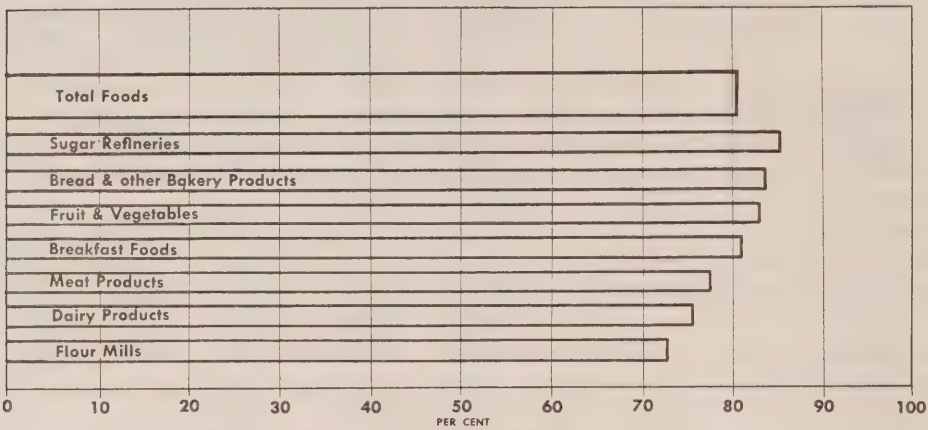
In food processing, as in other industries, most of the labour force receive payment in the form of wages. The proportion is about 80% for food processing as a whole and varies from 85% in firms producing bread and other bakery products to 71% for flour mills. (See Chart 11.)

[1] Mr. Bainard of National Grocers, a food wholesaling firm, indicated that their wage rates in the Toronto area increased about 60% in the 10-year period, presumably from 1949 to 1958. (*Proceedings*, p. 2970.)

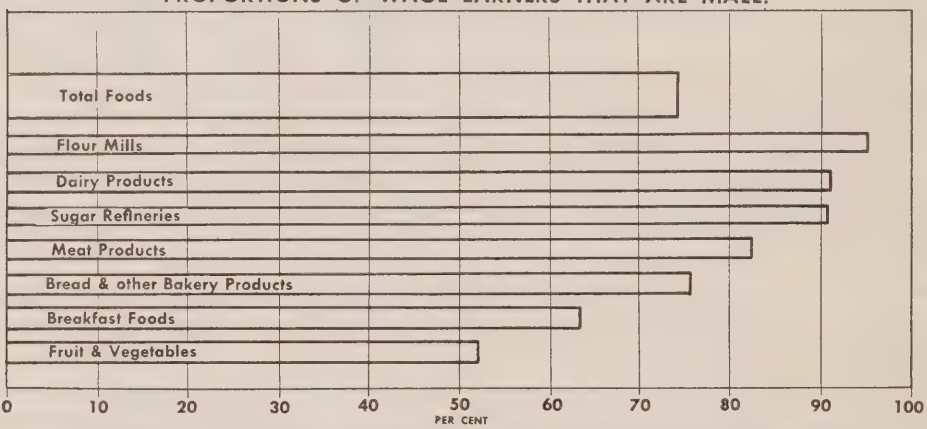
CHART 11

CHARACTERISTICS OF EMPLOYMENT IN FOOD PROCESSING, 1956.

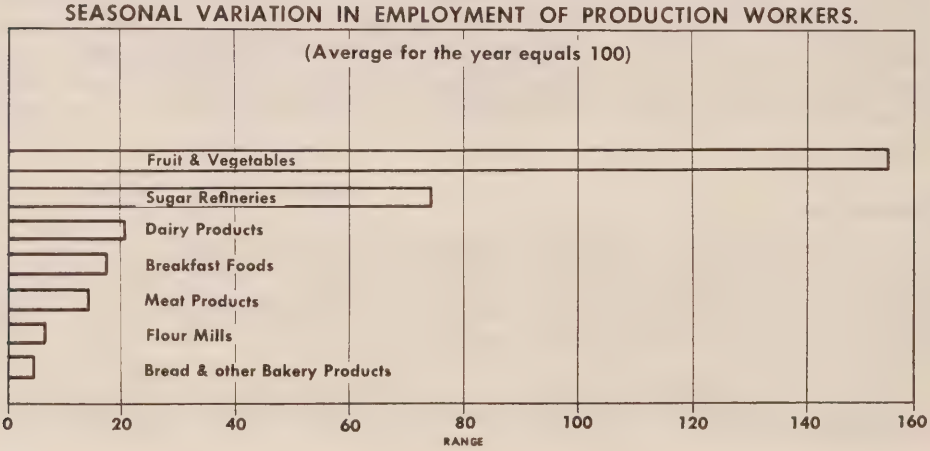
PROPORTIONS OF EMPLOYEES WHO RECEIVE PAYMENT IN THE FORM OF WAGES.



PROPORTIONS OF WAGE EARNERS THAT ARE MALE.



SEASONAL VARIATION IN EMPLOYMENT OF PRODUCTION WORKERS.



Most of the wage earners in the food processing industry are male (74%) but the proportion varies considerably, from a high of 95% for flour mills to a low of 51% for firms processing fruits and vegetables.

The regularity of employment depends on the flow of the raw materials to the firms engaged in the various types of food processing. For two groups, fruit and vegetable processors and sugar refineries, there is a high degree of seasonal variation in employment of production workers. The types of firms with the least seasonal variation in employment are flour mills and bakeries.

As we have indicated previously, it is difficult to deal with *salaries* because of other considerations that may be involved in the returns to employees who receive payment in the form of salaries. Nevertheless, some indication can be obtained from the increase in average salaries paid to the 20% of the labour force in the food processing industry that are paid on this basis. During the years 1949 to 1956, average salaries in this industry increased 50%. The increase was greatest in firms producing breakfast foods (70%) and lowest in flour mills and sugar refineries (36%).

Wages in food processing are usually paid on an hourly basis. A wide range in type of occupations and rates of pay exists in food processing. The lowest wages are paid to female workers such as cake icers ($0.95 per hour), wrapping machine operators for bread and cake ($1.10) in firms producing bread and other bakery products, and bacon wrappers and packers in meat packing ($1.34). Male employees typically receive higher wages as, for example, oven-men ($1.45) and breadbakers ($1.49) in bakery firms, wheat cleaners ($1.51) and sifter operators ($1.65) in flour mills, and ham trimmers ($1.68) and butchers ($1.83) in meat packing firms. The highest-paid wage earners in these firms are usually in jobs not special to the foods industry as, for instance, automotive mechanics ($1.58) hired by bakery firms, millwrights ($1.75) and electricians ($1.78) hired by flour milling firms, and machinists ($2.03) and steamfitters ($2.03) hired by meat packing firms. The number of workers in occupations such as these in food processing firms is small. In the dairy products industry, wage rates are quoted on a weekly basis and range from $40.46 for female packaging operators, to $57.25 for buttermakers, to $81.73 for stationary engineers, second class. [1]

We turn now to a consideration of labour costs and returns to wage earners and we will consider regularity of employment in food processing, levels and changes in hourly earnings, hours of work per week and weekly wages. The data drawn from the *Review of Man Hours and Hourly Earnings, 1946-57,* published by the Labour and Prices Division of the Dominion Bureau of Statistics, include: payments for overtime work; cost-of-living, incentive or production bonuses paid at regular intervals; and amounts credited to wage-earners on leave with pay. First, we deal with changes in earnings between 1949 and 1957 and then we deal with the level of earnings in 1957. (Table 14.)

During the period from 1949 to 1957, average hourly earnings in the manufacturing industry as a whole increased 62%. In the foods and beverages processing industry the increase was about the same, 61%. In each case the decline in the

[1] Rates of pay for the various occupations are obtained from *Wage Rates and Hours of Labour,* Department of Labour, Ottawa, October, 1957, and are averages for all of Canada. Overtime earnings are not included but the rates include cost-of-living bonus payments where applicable.

average work week was 1.9 hours, or about 5%. As a consequence, weekly wages rose by a lesser amount, 55% for manufacturing as a whole, and 53% for the foods and beverages industry. While these increases have differed slightly, they do illustrate the fact that firms engaged in food marketing hire labour in competition with firms in other sectors of the economy and must meet the general increases in wages that occur.

By 1957, the level of weekly wages for the foods and beverages industry was $55.93, or 16% below the level of wages for manufacturing as a whole. As firms producing distilled malts and liquors had the highest wages in the foods and beverages industry, an average for the foods group alone would be somewhat lower. Within the foods group there is considerable variation, ranging from $45.36 per week in fruit and vegetable processing to $66.44 in meat packing. It should be noted that in fruit and vegetable processing many of the workers are women hired on a seasonal basis.

Table 14—Changes in Hourly Earnings, Hours of Work, and Weekly Wages in Food Processing in Relation to All Manufacturing, 1949 to 1957[a]

Industry	1949 to 1957			1957	
	Increases in Hourly Earnings	Decreases in Hours per Week	Increases in Weekly Wages	Average Weekly Wages	Average Hours Worked per Week
	(%)	(hours)	(%)	($)	(hours)
All Manufacturing	62.3	1.9	55.0	64.64	40.4
Foods and Beverages	60.6	1.9	53.4	55.93	40.5
Distilled Malts and Liquors	74.0	2.1	65.3	72.50	39.9
Meat Products	56.8	2.4	48.0	66.44	40.0
Grain Mill Products	60.1	2.6	49.7	62.28	41.6
Bread and Other Bakery Products	63.6	1.1	59.5	54.40	42.8
Fruits and Vegetables	57.6	0.4	56.0	45.36	39.0

[a]All data in this table are based on annual averages for hourly-rated wage earners.

SOURCE: *Review of Man-Hours and Hourly Earnings, 1946 to 1957*, Labour and Prices Division, Dominion Bureau of Statistics.

Increases in weekly wages between 1949 and 1957 have been greater for the groups with a lower level of wages. An increase of 56% in weekly wages in fruit and vegetable processing has taken place, with the hours worked per week staying at about the 1949 level. In the bread and other bakery products group, there was a 60% increase in weekly wages after taking account of a slight decline in the average number of hours worked per week. In meat packing and the processing of grain mill products, where the weekly wages are above the average for the foods and beverages industry, weekly wages have increased 48% and 50% respectively, after taking account of declines in the hours worked per week.

In the foods and beverages industry between 1949 and 1957, the number of employees increased by 8%. During the same period, there was a 36% increase in the volume of production,[1] the net result being a 26% increase in output per

[1] We use here the revised Index of Industrial Production, published in D. B. S. *Reference Paper 61-502*, 1958.

worker. This has accompanied a considerable degree of investment in the industry. We have indicated above that average weekly wages in the foods and beverages industry increased 53% between 1949 and 1957. We have observed previously that earnings of employees as a proportion of the gross margin have increased only slightly from 36.3% to 37.2%. (See Table 12.) Thus, while labour costs per unit of product have increased, other costs and profits have also increased to about the same extent.

For food marketing as a whole, earnings of employees increased about 50% between 1949 and 1957. During the same period the consumer price index increased 21.9%. Thus, real earnings of employees in food marketing have increased by about 23%, or at an average rate of 2.6% per annum. This increase in real incomes is slightly greater than for Canadian consumers generally which, as we noted in Part I, was about 2% per annum.

2. Taxes

There are a number of taxes incurred by business firms which are treated in much the same way as any other business expenses. These include property and other taxes and business licences. Most foods are exempt from sales and excise taxes. In arriving at its net profits, the firm deducts these several types of taxes from its revenues, along with other expenses. This net profit can be related to investment and rates of return on investment computed. In the corporate sector, however, corporate income taxes are applied to the net taxable income, and the effective returns on investment are those after the payment of these corporate income taxes. Indeed, businessmen to a considerable extent view these taxes as an item of cost similar to other items of cost. [1]

Table 15—Rates of Tax on Taxable Income of Corporations, Canada, 1949 to 1957

Year	Corporate Income Tax	Old Age Security Tax	Tax as Proportion of Taxable Income for Corporations Engaged in Food Marketing[a]
			(%)
1949	10% on first $10,000, 33% on the remainder	None	33
1950[b]	15% on first $10,000, 38% on the remainder	None	34
1951	15% on first $10,000, 45.6% on the remainder	None	42
1952	20% on first $10,000, 50% on the remainder	2%	48
1953	18% on first $20,000, 47% on the remainder	2%	48
1954	20% on first $20,000, 47% on the remainder	2%	45
1955	20% on first $20,000, 47% on the remainder	2%	41
1956	20% on first $20,000, 47% on the remainder	2%	43
1957	20% on first $20,000, 47% on the remainder	2%	41

[a] Computed from data provided in *Taxation Statistics*.

[b] The same as 1949 until September, when the increases took effect.

SOURCE: *Taxation Statistics*, Department of National Revenue.

[1] See, for example, the submission of the Winnipeg Chamber of Commerce, *Proceedings*, p. 932.

In considering rates of return on investment in the corporate sector of food marketing, we are interested, therefore, in the level and in changes in the level of corporate income taxes. The rates of corporate income tax increased in the early part of the 1949 to 1957 period, and have remained at levels close to 50% since then. The specific rates on taxable income are summarized in Table 15.

The effective rates are somewhat below this because of particular provisions in the tax legislation. For corporations engaged in food marketing, corporation taxes and old age security taxes in total have ranged from 33% to 48% of taxable income during the years 1949 to 1957. The proportions are provided in Table 15. The ratio of taxes to taxable income increased to a peak in 1952 and 1953 and has since declined.

3. Net Profit After Taxes as a Return on Investment

The net profits of corporations engaged in food processing, wholesaling and retailing are provided in *Taxation Statistics,* published annually by the Department of National Revenue. Between 1949 and 1957 the aggregate profits after taxes of all corporations engaged in food marketing increased from $60 million to $101 million.[1] This increase is influenced, of course, by the variations in tax rates we discussed in the previous section and also by the shift that has occurred towards the corporate form of organization.

We could observe the relationship of corporate profits, after taxes, to sales or as a proportion of the overall price spread as measured by the marketing bill in Part IV. We would observe some decline in profits in relation to these magnitudes. This fact, however, is of little help in looking at returns to capital invested in food marketing. In a period of expanding general economic activity and generally rising price levels, rates of return on investment may remain stable or increase even though profits after taxes are declining in relation to sales. In such a period, the volume of business done by firms may be expanding rapidly.

Measures of Investment

In order to consider rates of return on investment, it is necessary to measure the investment with which net profits after taxes are associated. We use here as a measure of investment the "shareholders' equity" which is the total of the value of the capital stock plus the undivided surplus. This does not indicate the total investment in the corporations. Bonded indebtedness and bank loans, for which interest payments are made, also reflect investment. We limit our consideration here to the shareholders' investment and the rates of return on this investment, and to the increases that have taken place in investment by shareholders. This investment may take place through the retention of earnings by the corporation or by the issuing of new shares.

[1] In order to give some perspective, we refer the reader to Part IV, where we indicate that the overall farm-retail marketing bill increased from $900 million in 1949 to $2,132 million in 1957.

Rates of Return on Investment

We are interested in rates of return on investment in various phases of food marketing in relation to other sectors of the economy. We have assembled information on the actual rates of return and on changes within the various groups of firms engaged in food marketing in the period from 1949 to 1957. This information is summarized in Table 16.

The information that we have drawn together in Table 16 comes from two sources—the corporate tax statistics, published by the Taxation Division of the Department of National Revenue, and from replies to a questionnaire sent to business firms by the Commission. In each case the data are for incorporated companies.

Table 16—Rates of Return on Investment After Taxes

	1949	1950	1951	1952	1953	1954	1955	1956	1957	Average
Total Retail Trade	14.7	14.2	11.4	8.5	9.0	6.2	7.0	8.0	8.8	9.8
Retail: Dairy Products	5.2	7.2	6.6	6.8	7.6	9.2	9.4	7.6	7.7	7.5
3 Dairies	5.5	7.6	5.2	8.3	7.9	7.5	9.1	8.4	8.6	7.7
Retail: Other Food Products	16.8	17.2	16.1	17.7	17.4	14.3	13.2	10.6	12.0	15.0
5 Chain Store Organizations	20.1	21.2	19.3	19.7	18.9	17.8	16.9	15.0	14.9	17.1
Total Wholesale Trade	13.3	15.2	14.9	10.4	8.5	6.7	9.0	11.2	10.3	11.1
Wholesale: Food Products and Farm Products, n.e.c.[a]	8.8	11.6	8.3	7.5	6.7	6.0	5.6	7.6	7.4	7.7
5 Food Wholesalers	9.6	8.0	6.6	10.2	8.5	7.7	10.0	9.6	9.8	9.0
Total Manufacturing[b]	12.8	15.2	13.7	10.3	9.9	7.5	9.4	9.2	8.5	10.7
Total Food Processing	8.5	9.0	8.8	7.6	8.7	8.2	8.2	7.9	8.3	8.4
Slaughtering and Meat Packing	7.6	10.5	9.0	7.3	10.9	7.8	8.3	9.1	9.0	8.8
3 Meat Packers	9.4	9.5	3.6	11.6	9.0	6.9	8.3	7.9	7.9	8.2
Dairy Products Manufacturing	12.0	15.9	10.4	8.4	11.1	9.0	10.1	10.5	10.3	10.9
Bakery Products	10.3	8.3	6.9	8.0	7.2	6.5	6.0	5.8	5.7	7.2
5 Bakery Firms	6.3	4.3	8.0	10.5	9.6	8.4	6.9	6.3	6.2	7.4
Grain Mill Products	8.3	8.3	8.8	7.0	7.0	7.3	5.7	6.9	8.2	7.5
3 Breakfast Food Firms	26.4	30.5	25.2	29.8	30.5	28.4	30.2	32.3	29.3	29.2
3 Flour Mills	6.2	6.5	7.7	6.9	6.7	7.3	7.1	6.1	3.3	6.4
Canned and Preserved Fruits and Vegetables	6.2	4.9	10.8	9.2	7.3	7.6	7.6	7.2	7.2	7.6
4 large Fruit and Vegetable Processors	5.0	11.0	10.3	8.6	9.4	10.8	10.0	9.3	6.4	9.0
4 medium Fruit and Vegetable Processors	c	13.0	14.4	8.6	6.7	9.8	3.7	7.4	4.2	6.7
3 small Fruit and Vegetable Processors	8.8	15.3	15.4	17.8	7.0	12.8	14.2	9.6	6.5	11.9
Miscellaneous Foods	9.1	9.4	8.6	6.8	9.7	9.6	8.3	8.4	10.4	8.9
3 Sugar Refineries	7.9	8.1	8.4	6.6	9.2	7.5	7.9	8.7	9.6	8.2

[a]n.e.c. = not elsewhere classified.

[b]For the years 1957 and 1958 we can also obtain a measure of the rate of return on investment from a survey of manufacturing firms carried out annually by the Canadian Manufacturers Association, which is reported on in Circular No. 3075 of the Association, dated May 14, 1959. For 1957 the rate was 9.2% and for 1958, 7.3%.

[c]This group of firms incurred a loss in 1949.

SOURCE: Those figures with numbers of firms indicated come from questionnaire returns; other groups are taken from *Taxation Statistics*. In each case, both profit and loss companies are included.

Corporate net profits after taxes are the residual return to the shareholder after all expenses and taxes have been paid. As such, they vary from year to year, with variations arising from almost any conceivable source. For this reason it is difficult to compare rates of return on investment for individual years. We would expect, however, that average rates of return over a period would be approximately the same in overall retailing, wholesaling and manufacturing. This has been the situation over the period from 1949 to 1957 with the nine-year average ranging

from 9.8% for corporations engaged in retailing to 11.1% for those engaged in wholesaling; those engaged in manufacturing averaged 10.7%. It will also be observed that rates of return have declined from the levels reached in 1949 or 1950. (The decline is partly attributable to the fact that rates of corporate income tax have increased since the early part of the period.)

In order to indicate changes more clearly, we have shown in Chart 12 the rates of return on investment after taxes for the groups of corporations in the food field. The rates of return shown are those included in Table 16. In addition, we have shown in Chart 12 the rates of return on investment before taxes.

We have referred to a general tendency for rates of return on investment after taxes to decline from the levels reached in the early part of the period. This has varied between the different groups and one of the factors has been the differing conditions of growth. We would expect to observe a tendency for shareholders' investment to be increasing more rapidly in industries where rates of return are high and we would expect the rate of return to decline as investment in the industry increased, particularly if the rate of investment is high.

It can be seen by comparing the data in Table 17 with Table 16 and Chart 12 that these general conditions hold. In the retailing field, there are data for two food groups. One, dairy products, was a group with low rates of return and there was a decline in overall shareholders' investment in corporations in this group. However, it should be noted that rates of return here have been increasing. This is in contrast to most of the other groups with which we will deal.

The "other food products" group in the retailing field includes the corporate food chains as a major part. Here, we observe that the rate of return on investment has averaged considerably above that for all retail corporations—15.0% as compared to 9.8%. The rate of return showed some decline during the period accompanying the very rapid investment.

An analysis of the movement of the rate of profit, year by year, from 1949 to 1957 shows that the rate of return remained high from 1949 to 1953 and, indeed, would have increased sharply had it not been for increased corporation taxes in 1951, 1952 and 1953. From 1953, the rate of return declined until 1956 but there was a rise in the rate of return earned in 1957. The five major corporate chains, which form an important part of this group, had the same pattern of change in rates of return, but there was no increase in 1957. The average rate of return after taxes for the period was above that of the overall group—17.1% as compared to 15.0%. (Table 16.)

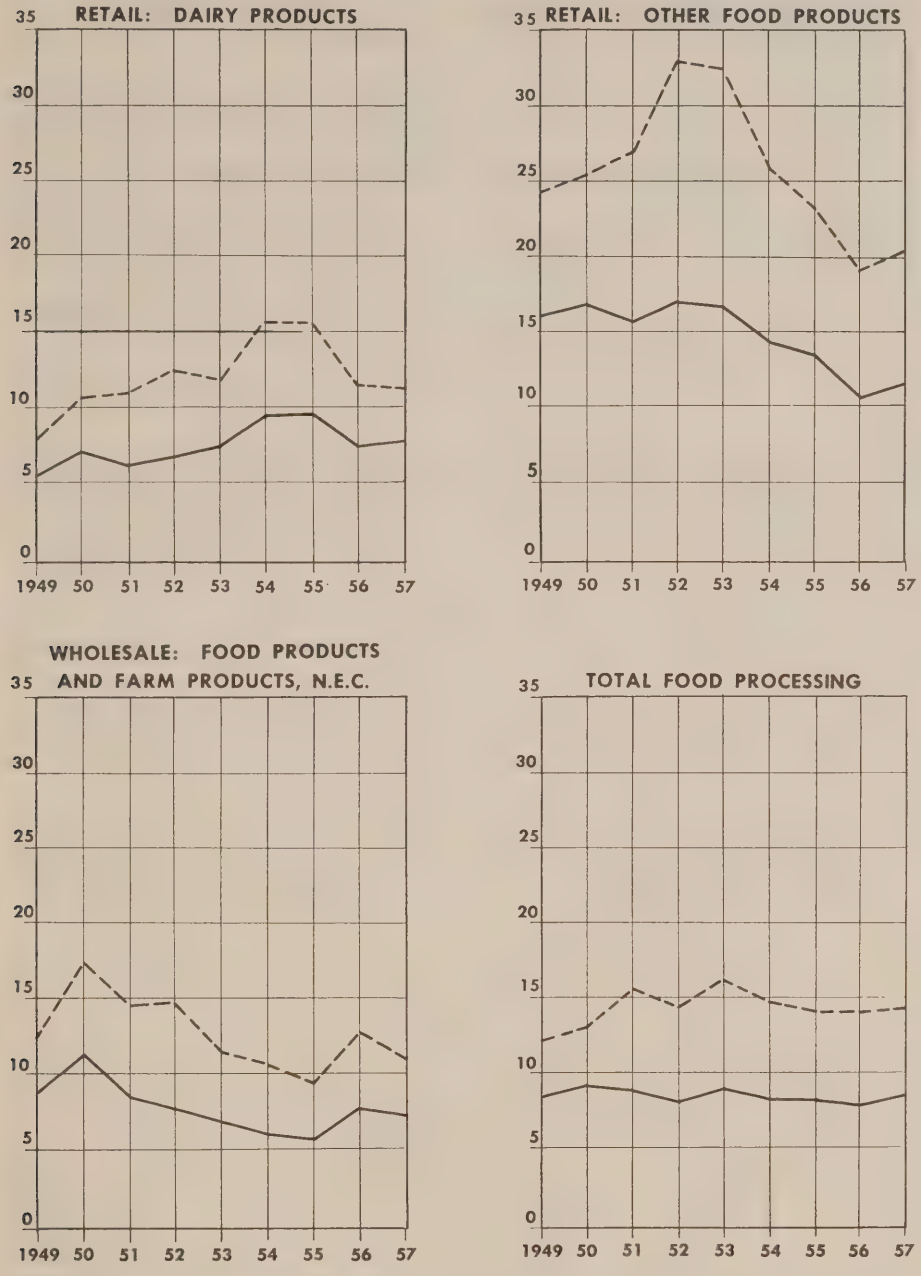
How can we explain the fact that the corporate chains have been able to earn a high rate of return for so long?

Changes in demand after the war created highly profitable opportunities for new facilities and new investment in food retailing. The corporate chains already established in Canada quickly adapted themselves to the new situation and their activities proved highly profitable. The rate of profit remained extremely high until 1953.

The rate of new investment in the corporate chains operating in Canada is limited by the capacity of the organizations to handle the administrative problems of expansion; their rate of expansion was, nevertheless, quite rapid, although not so rapid as to reduce the rate of return before 1953. The opportunities for the

CHART 12

RATES OF RETURN ON INVESTMENT, BEFORE AND AFTER TAXES



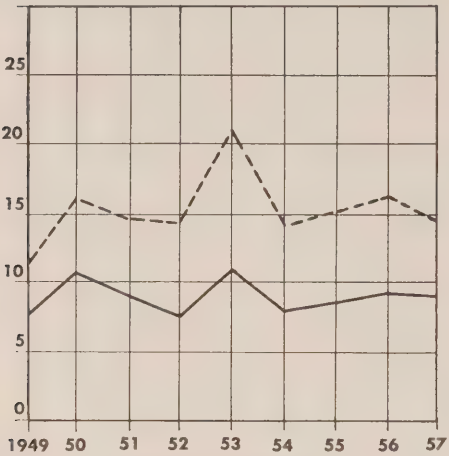
LEGEND: — — before taxes
——— after taxes

SOURCE: Computed from data published in Taxation Statistics, Department of National Revenue.

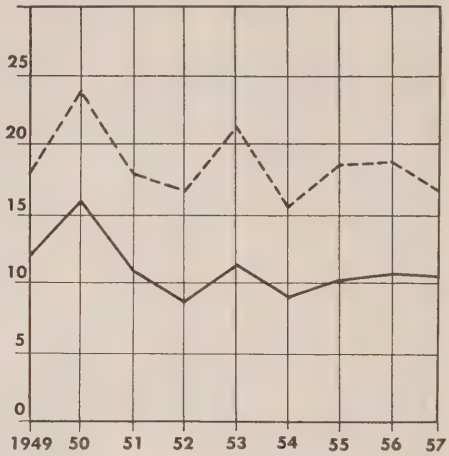
CHART 12 (continued)

FOOD PROCESSING

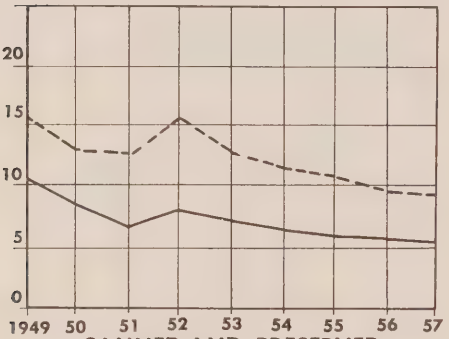
SLAUGHTERING AND MEAT PACKING



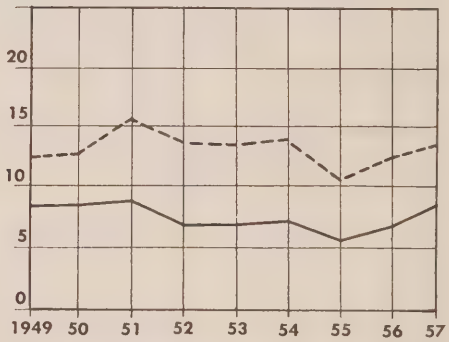
DAIRY PRODUCTS



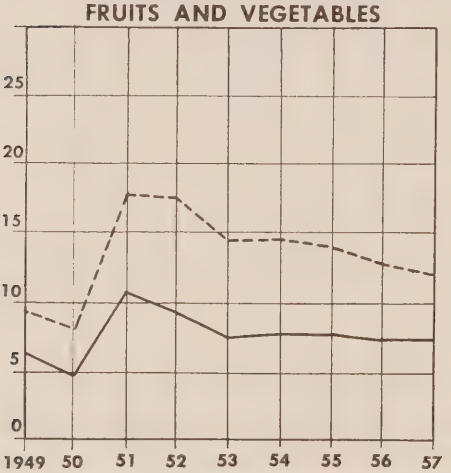
BAKERY PRODUCTS



GRAIN MILL PRODUCTS



CANNED AND PRESERVED FRUITS AND VEGETABLES



MISCELLANEOUS FOODS

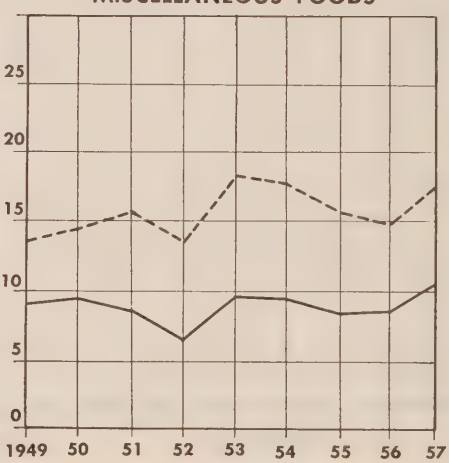


Table 17—Increases in Shareholders' Investment for Groups of Corporations, 1949 to 1957

Group	Per Cent Increase in Shareholders' Investment
Total Retail Trade	94.6
Retail: Dairy Products	−6.6
Other Food Products	301.1
Total Wholesale Trade	126.0
Wholesale: Food Products and Farm Products, n.e.c.[a]	49.3
Total Manufacturing	96.4
Food Processing[b]	71.6
Slaughtering and Meat Packing	53.0
Dairy Products	259.0
Bakery Products	111.3
Grain Mill Products	35.5
Canned and Preserved Fruits and Vegetables	33.1
Miscellaneous Foods	68.8

[a] n.e.c. = not elsewhere classified.
[b] Excluding fish processing.
SOURCE: *Taxation Statistics*, Department of National Revenue.

development of new chain organizations is limited by the "know how" even if prospective returns are attractive to investors. Intrusion from the United States was possible, but to a considerable extent United States chains were occupied with expansion in that country.

The decline in profits following 1953 indicates: (1) the chains were catching up on the increase in demand in the more favourable situations; (2) the voluntary chains were expanding their operations; (3) some intrusion of new United States chains began.

The continued expansion of the major retail chains through 1958 and 1959 may well result in an eventual decline in profits but the 1958 reports of the major chains indicate that rates of return in 1958 remained close to the 1957 levels.

The general conclusion is that the tendencies characteristic of unobstructed access to investments promising high rates of return have been operating in food retailing, but with a lag resulting from normal problems of expansion, and short-period irregularities due to general movements of prices.

This analysis does not render invalid the argument that the chain stores are no longer low-price outlets and that their promotional techniques are designed to achieve volume of sales by adding services rather than by reducing prices.

In the wholesaling field, there is information for only one group dealing in farm and food products; for this group the rate of return on investment has averaged below that for the overall wholesaling field and has been declining. Also, the rate of growth of shareholders' investment has been less than for wholesaling in general. The Commission obtained information from a number of food wholesalers; information for five of the largest as a group is included in Table 16, and indicates less of a decline over the period than does the overall group from *Taxation Statistics;* also, the rate of return averaged 9.0% as compared to 7.7% for the whole group.

In the manufacturing field, rates of return for the groups in food processing (an overall average of 8.4%) are considerably below those for manufacturing as a whole (10.7%), except for the dairy products group where the rate of

return (10.9%) has been as high as for manufacturing as a whole, and where shareholders' investment has increased rapidly in response to this attractive rate of return. Meat packing and the miscellaneous foods group have had rates of return on investment higher than the remaining groups. In each of these three groups, the rate of return has not declined to any great extent over the period.

For each of the groups of food processors for which the Commission has information for firms of a comparable type, the average rates of return over the period are close to the average for food processors as a whole. In the case of one group, the fruit and vegetable processors, it is evident from looking at smaller groups of firms that the rate of return on investment varies considerably from year to year. It will also be apparent from the data on this type of processor in Table 16 that rates of return are not any higher for the larger firms.

The grain mill products group contains firms varying widely in type, including flour mills, breakfast food firms, and firms producing animal feeds. We have separate data for several firms in each of the first two categories and their rates of return differ greatly, averaging 29.2% over the period for the three breakfast food firms and 6.4% for the three flour mills. There has been no tendency for the rates of return for the three breakfast food firms to decline; the shareholders' investment in these companies has increased only 18% over the period. As we have noted in Part II,[1] however, a new firm has begun activities in this field in Canada in recent years. We have referred already to the high degree of promotional activity in this industry.

The miscellaneous foods industry covers a wide range; we have information only for firms of one type—sugar refineries. The rates of return on investment did not decline over the period for either the overall group or for the sugar refineries, and the average for each group was between 8% and 9%.

We have compared rates of return on investment for various groups of corporations, taking net profits after taxes in relation to shareholders' investment. In many corporations, including those engaged in the processing and distribution of food, part of the earnings are retained and re-invested, with the increase in value of the firm accruing to the shareholders. However, this is an alternative rather than an additional return to the receipt of dividends.

4. Changes in Returns to Resources in Food Marketing and Agriculture

We have noted earlier in this part that the real earnings of employees in food marketing increased by about 23% over the period 1949 to 1957; in terms of actual dollars the increase was spread over the period.

For most groups of corporations engaged in food marketing, the rates of return on investment either have declined from relatively high levels or have not increased since the early years of the period; the dairy products group in retailing is an exception to this generalization.

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[1] See p. 77.

In considering changes in the income position of farmers in Part I, we noted that the net farm operating income[1] per farm increased by 14% between 1949 and 1958; in real terms it declined 8%. In looking at the return to resources in agriculture, we should, however, look at changes in the returns to workers and other resources employed in agriculture.

The average net farm operating income per non-paid farm worker in 1958 was $2,582 and represents a 21% increase over 1949. (In real terms there was no increase.) If we use the income measure of net farm income, the average per non-paid farm worker was $1,973 in 1958, 11% higher than in 1949. (In real terms there was a decrease of 9%.) For hired farm labour, we turn to information on farm wage rates. Based upon a monthly wage of $74.87, including the value of room and board, paid farm labour had an annual income of $898 in 1949. By 1958, the monthly wage on the same basis as the foregoing had risen to $101.00, or an annual rate of $1,212, representing an increase of 35%. (In terms of real income, however, the paid farm labourer realized only an 8% increase in this period.)

In the income of the non-paid farm workers referred to above, are included the returns to the farm operator and his family for labour and for their capital investment in farming. While the total investment in agriculture has not increased during the period in real terms, there has been a sharp decline in the number of workers. As a result, the investment per worker has increased considerably. Thus, it is apparent that the returns per unit of labour and capital engaged in agriculture have not increased during the period.

[1] "Net Farm Operating Income" is the sum of cash income from the sale of farm products, income in kind and supplementary payments *less* cash expenses. It does *not* allow for depreciation. If we had used "net farm income" per farm, where an allowance is made for depreciation and in addition account is taken of inventory changes, the changes in the income position of farmers would have appeared to be even worse.

PART IV

FOOD EXPENDITURES, FARM RECEIPTS AND THE "MARKETING BILL"

Our main purpose in this part is to measure the aggregate food marketing bill which is the difference between the total expenditures of consumers on Canadian-produced food at retail and the total receipts of farmers from the sale of the food materials. To calculate the food marketing bill we need first to determine consumer expenditures at retail. Reference to consumer food expenditures provides the opportunity to present some analysis of the relation between incomes and food expenditures and consumption, which are relevant to our inquiry. Our second calculation necessary to arrive at estimates of the marketing bill requires the determination of the farm value of food consumed. Reference to farm receipts provides the opportunity to call attention to some changes in the relative quantities of particular farm products entering into domestic Canadian consumption. Having arrived at a measure of the marketing bill for the period 1949 to 1958, we discuss the factors responsible for the observed increase. We then report on the increases in certain components of the total bill.

CHAPTER 1

CONSUMER INCOME AND FOOD EXPENDITURES

1. Personal Disposable Income

In Part I we introduced a measure of consumers' income referred to as Personal Disposable Income.[1] The Aggregate Personal Disposable Income is a measure of the total amount of money available to Canadian consumers to be spent or saved largely as they choose. In Table 18 we repeat the annual values of disposable incomes given in Table 1, Part I, and show for the same years the estimated food expenditures per person in dollars and as a per cent of income per person. The increase in aggregate disposable income, 1949 to 1958, amounted to 91%. This increase was associated with an increase in population of 27%, and a rise in prices as measured by the consumer price index of 22%. We noted in Part I that consumers' disposable real income per capita increased during this period. Money income increased at a rate 17% faster than the prices of goods and services.

2. Distribution of Consumers' Income and Proportion Spent on Food

Referring again to Table 18, we see that disposable income per person increased by about $450 from 1949 to 1958. This increased income was distributed among various forms of expenditure.[2] The increases in expenditure per capita on various classes of consumers' goods are reflected in Chart 13. It will be seen that the rate of increase in per capita expenditures on food was less than for other classes of goods with the exception of tobacco and alcoholic beverages

Table 18—The Relation Between Income and Food Expenditure per Person, 1949 to 1958

Year	Aggregate Disposable Income	Population	Disposable Income per Person	Food Expenditure per Person	Food Expenditure as a Per Cent of Income per Person
	($ million)	(thousands)	($)	($)	(%)
1949	11,849	13,447	881	215	24.4
1950	12,688	13,712	925	229	24.8
1951	14,794	14,009	1,056	258	24.4
1952	16,072	14,459	1,112	263	23.6
1953	16,904	14,845	1,139	262	23.0
1954	16,984	15,287	1,111	264	23.8
1955	18,329	15,698	1,168	270	23.1
1956	20,153	16,081	1,253	284	22.7
1957	21,107	16,589	1,272	296	23.3
1958	22,600	17,048	1,326	303	22.8

SOURCE: D.B.S. *National Accounts, Income and Expenditure*, various issues.

1 See footnote 2, p. 8 (Part I) for a definition of personal disposable income.

2 For a detailed treatment of long-run trends, see the special study *Consumption Expenditures in Canada* by David W. Slater, Royal Commission on Canada's Economic Prospects, May, 1957.

and clothing and personal furnishing.[1] Food expenditures per person advanced from $215 in 1949 to $303 in 1958, an increase of 41%. However, expenditures on food, which in 1949 accounted for 24.4% of income, by 1958 accounted for only 22.8% of the average Canadian budget.[2]

In Part II we examined the impact of population increases, changes in standards and conditions of living, including suburban development and the increase in automobile ownership and other matters upon the retail food trade, with particular reference to the chain supermarket. And in Part I we pointed to the disparity in rates of change in income over the period among groups of producers and consumers.

Our reference above to the proportion of income spent on food is a generalization drawn from national aggregates. We would be concerned if readers of this report took this to be either a representative or an ideal figure, particularly as a guide to apportionment of the family income. Because this figure is calculated from an aggregate, it represents a wide range of different experiences with all possible variations in geographic and social and economic conditions.

Unfortunately, we are limited in studying changes in income flows among occupational categories in the population, as explained in Part I. From income tax data, we can, however, derive some indications about the distribution of income to the population generally. We are interested in changes in income distribution because of their effect on the level of expenditures on foods and in the distribution of those expenditures over various kinds or groups of foods and the services associated with food.

Our analysis of data on income distribution leads us to the conclusion that there has been little, if any, change over the 1949 to 1958 period. To put it in another way, both at the beginning and end of the period, the lower 50% of the income earners receive less than 30% of the total personal income, and the upper 12% of income earners about the same proportion.

The relevance of this stability in income distribution to changes in food expenditures is that the proportion of income spent on food differs between the lower and the higher income groups. In the lowest income groups, a high proportion of income is spent on food and this proportion declines progressively for the higher income groups. However, total expenditures on food, although a smaller proportion of income, increase as incomes rise. Thus, had there been a significant shift in income distribution from higher to lower earners during this period, it is quite possible that food expenditures as a proportion of income would not have fallen and might even have increased. Further, the distribution of food expenditures among types or kinds of food might have yielded rather different results in consumption from those presented in a later section.

The importance of income distribution in relation to food purchases is substantiated in the urban family expenditures surveys of the Dominion Bureau of Statistics. For example, in the 1955 survey it was found that families with incomes of less than $2,500 a year spent on the average $271 a year per person on food, and $817 a year per family; families with incomes over $6,000 spent on the

1 See Chart 4, Part I, for changes in relative prices.

2 *National Accounts.* The food component includes retail sales and the value of food sold in restaurants after an adjustment to eliminate the service portion. It also includes the self-supplied farm portion valued at farm prices.

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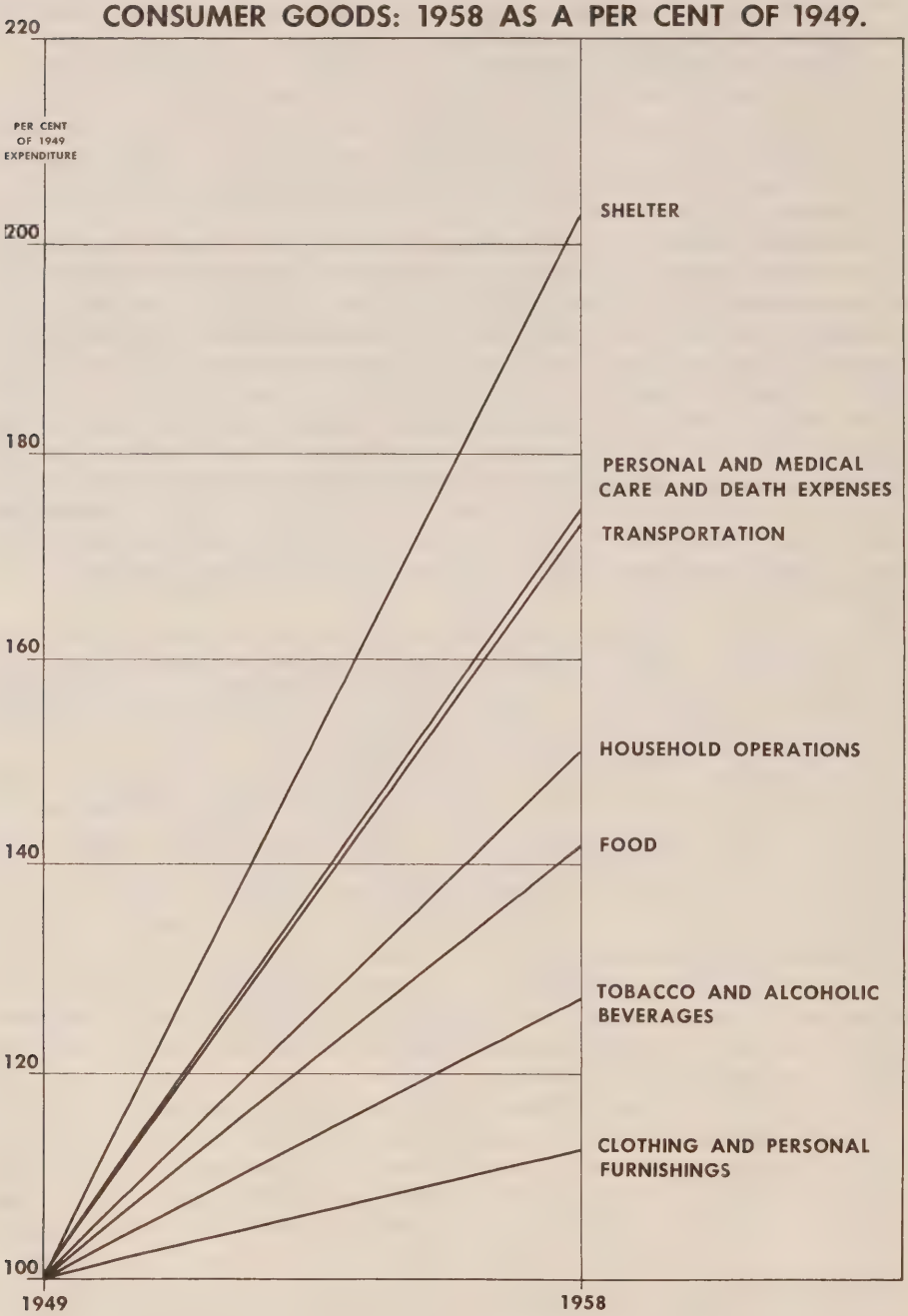
CHART 13

ACTUAL PER CAPITA EXPENDITURE ON VARIOUS CLASSES OF CONSUMER GOODS: 1958 AS A PER CENT OF 1949.



Source: D.B.S. National Accounts, Income and Expenditure.

average $405 per person on food, and $1,344 per family. The proportion of family income spent on food in the $2,500 income group was 37%, and for the over $6,000 group, 19%.

While food expenditures in the aggregate and as a proportion of income are affected by changes in income, changes in social conditions also play a part. Many of the changes in social conditions are the result of or are associated with income increases. If more married women are working, then the types and kinds of food and services associated with the food purchased will be different. The number and kinds of food preparation and storage facilities in the home will also affect food expenditures, both in total and in kinds or types of food and the services bought with the food.

In Part II, among other things, we mentioned that during and following World War II women generally had found opportunities in employment in Canada and that, particularly, more married women were in the labour force. In some of the evidence presented at the hearings,[1] we were told that the demand for more food services was partly, or even in good measure, attributable to the "working wives". While this may have been a factor prior to 1949, we have been unable to establish evidence which would support this as a new or an increasingly important factor in the period from 1949 to date. While there have been changes in the number of married women of different age groups employed during this period, there has been no overall increase in the proportion of married women employed. Some changes in food spending habits in the 1949 to 1958 period may have been the result of an increase in the proportion of working married women of the middle-age group and a decline in the number of younger married women working.

Important changes in meal preparation facilities have been the increase in modern-type cooking equipment, (oil, gas and electric) and in storage and preservation equipment such as mechanical refrigerators and deep-freeze cabinets. These have brought in their train some of the changes in the amounts and kinds of services incorporated in or associated with the food items.

Returning to the consideration of aggregate food expenditures, we find that changes of the kind just described have caused changes in the kinds of food purchased in recent years. Their effects show up in the Canadian food budget. As the direction of change has been from the less expensive to the more expensive foods at retail, the shift has contributed to maintaining the proportion of income spent on food. If consumers in 1958 had bought the same market basket of foods as they purchased in 1949, it would have taken 19.8% of their income instead of 22.8%; to express it another way, food expenditures per person in 1958 were 19% higher than in 1949 because of changes in the items in the total Canadian food budget. The relations between income and food expenditures, and the effects of the shift to higher-priced foods are shown in Table 19 and Chart 14.

As we have occasion to stress at various points in our report, food expenditures of consumers are not payments for food materials only. Consumer expenditures on food are, in part, payments for services which become associated with food materials, and, as we show presently, the amount of services in the food marketing bill has increased significantly over the period. It follows that the per cent of income spent on food materials is substantially less than 22.8% and

[1] See *Proceedings*, Vol. 28, p. 4543.

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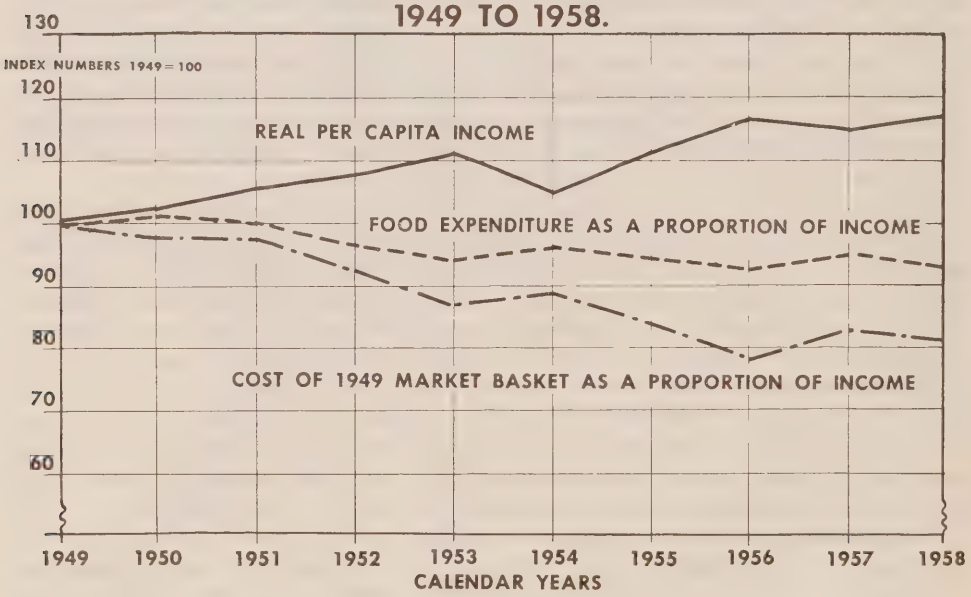
that, only insofar as there has been an increase in services between 1949 and 1958, expenditures as a per cent of income appear to have been maintained. We proceed to show that the per capita consumption of food materials has not increased at all.

From detailed estimates of rates of food consumption, we have assembled the data in Table 20. Total food materials consumed per capita, as measured at retail, averaged 1,445 pounds per year in the three years 1948 to 1950, and 1,426 pounds in the years 1955 to 1957. Thus, over the period there was virtually no change in the total weight of food materials purchased per person.

We do not wish to imply that every Canadian is receiving an adequate supply of the right kinds of food, whatever the right kinds may be. Some recent findings of nutritionists suggest that the number of underfed and undernourished are about balanced by the number of overfed people in Canada.[1] The Canadian evidence, which is supported by evidence from the United States and elsewhere,[2] is that once consumers have reached a relatively satisfactory level of diet, there are but slight variations from year to year in the average weight of food consumed per person. As we have noted above, this does not, of course, rule out a continuous adjustment in the rates at which different types or kinds of food are purchased.

CHART 14

THE RELATIONSHIP BETWEEN CHANGES IN INCOMES AND CHANGES IN THE PROPORTION OF INCOME SPENT ON FOOD, 1949 TO 1958.



[1] "Report of Canadian Average Weights, Heights and Skinfolds", *Canadian Bulletin on Nutrition*, Vol. V, No. 1, September, 1957.

[2] *Food Consumption Levels in Canada, the United Kingdom and the United States*, Report of a Special Joint Committee set up by the Combined Food Board, King's Printer, Ottawa, 1944.

Table 19—Estimates of Retail Cost of 1949 per Capita Food Basket

Year	Retail Cost of[a] 1949 Basket	Per Cent of Disposable Income
	($)	(%)
1949	215	24.4
1950	221	23.9
1951	252	23.9
1952	251	22.6
1953	242	21.2
1954	241	21.7
1955	241	20.6
1956	244	19.5
1957	255	20.0
1958	262	19.8

[a] Estimated retail value of the per capita consumption of food in 1949 based on 1949 food expenditures and the retail price index for food.

Table 20—Changes in the Consumption of Food per Capita by Food Groups: Total in Pounds at Retail 1948-50 and 1955-57[a]

Food Groups	Average 1948–50	Average 1955–57	Per Cent Change
	(lb.)	(lb.)	(%)
Meats (excl. Poultry & Fish)	135.8	145.6	+ 7.2
Poultry	15.4	25.3	+64.3
Fish	12.8	13.5	+ 5.5
Eggs	34.3	36.8	+ 7.3
Dairy Products (excl. Butter)	446.7	436.2	− 2.4
Cereal Products	169.3	160.0	− 5.5
Potatoes (White & Sweet)	217.2	154.9	−28.7
Vegetables	86.6	92.5	+ 6.8
Tomatoes & Citrus Fruit	71.8	82.4	+14.8
Other Fruit	71.5	96.2	+34.5
Sugars & Syrups	110.2	110.6	+ 0.4
Pulses & Nuts	13.3	10.9	−18.1
Starch	1.6	1.6	0.0
Oils & Fats (incl. Butter)	48.7	48.4	− 0.6
Tea & Coffee	10.0	10.7	+ 7.0
Total Retail Weight Equivalent	1,445.2	1.425.6	− 1.5

[a]Expressed in terms of retail weight equivalent except for meats which are in terms of carcass weight; poultry on an eviscerated basis and tea and coffee in terms of primary distribution weight.

SOURCE: D.B.S. *Apparent Per Capita Domestic Disappearance of Food in Canada*, Annual Statements.

From Table 20, as well as from longer-run comparison,[1] we observe that consumption per person of potatoes, pulses and nuts and all cereal products has been declining. Excluding butter, because of the shifting from butter to margarine which has taken place in the 1949 to 1957 period, the consumption of dairy products has remained relatively constant. Fats and oils, sugar and starch also have shown little change. In general, consumption of beef, pork, and poultry meats has been rising. These changes reflect the tendency with increasing incomes to shift towards the consumption of more expensive foods. Divergence from the normal effects of income occurs when, for particular reasons, food price relationships

[1] See W. M. Drummond and W. MacKenzie, *Progress and Prospects of Canadian Agriculture*, Queen's Printer, Ottawa, 1957, p. 32.

change. In the decade just past, chicken meat has been much less expensive. Between the periods 1948 to 1950 and 1955 to 1957, consumption of chicken, turkeys and other poultry meats rose by 64%.

The data we presented in Table 20 are average rates of consumption, as measured in terms of weight at retail, for food groups classified in most instances by the origin of the raw materials. Therefore, these data do not reveal some of the changes in rates of consumption taking place among forms or types of food products.

In Table 21 we have drawn together available information covering certain broad groups of processed food products. For two of the groups, canned foods and frozen foods, the increases in rates of consumption have been substantial; for two others, breakfast foods and dried fruits, there has been a decline.

The commodity studies in Part V deal in more detail with changes in the rates of consumption of specific foods. The purpose of the discussion at this point in the report is to draw attention to the changes that have been taking place in rates of consumption for different food products, and to emphasize that these changes are mainly the result of increased real consumer incomes together with shifting price relationships among various food products.

In summary, the evidence we have drawn from Canadian experience over the past 10 years indicates the following important relations. First, as real incomes of consumers increase, there is a tendency for expenditure on food to rise as consumers shift towards the purchase of more expensive food materials and more services, although, as real incomes increase, the per cent of income spent on food tends to decline. Second, as incomes generally increase, there is little or no change in the consumption of physical food materials per capita. Third, changes in the prices of particular foods result in shifts in consumption to those foods which become relatively low in price.

Table 21—Per Capita Consumption of Certain Types of Processed Foods in Canada, Average 1948-50 and 1955-57

Period	Canned Foods	Frozen Fruits and Vegetables	Dried Fruits	Breakfast[a] Foods
		(pounds)		
1948–50	104.3	0.8	6.9	12.4
1955–57	122.8	3.4	6.0	11.6

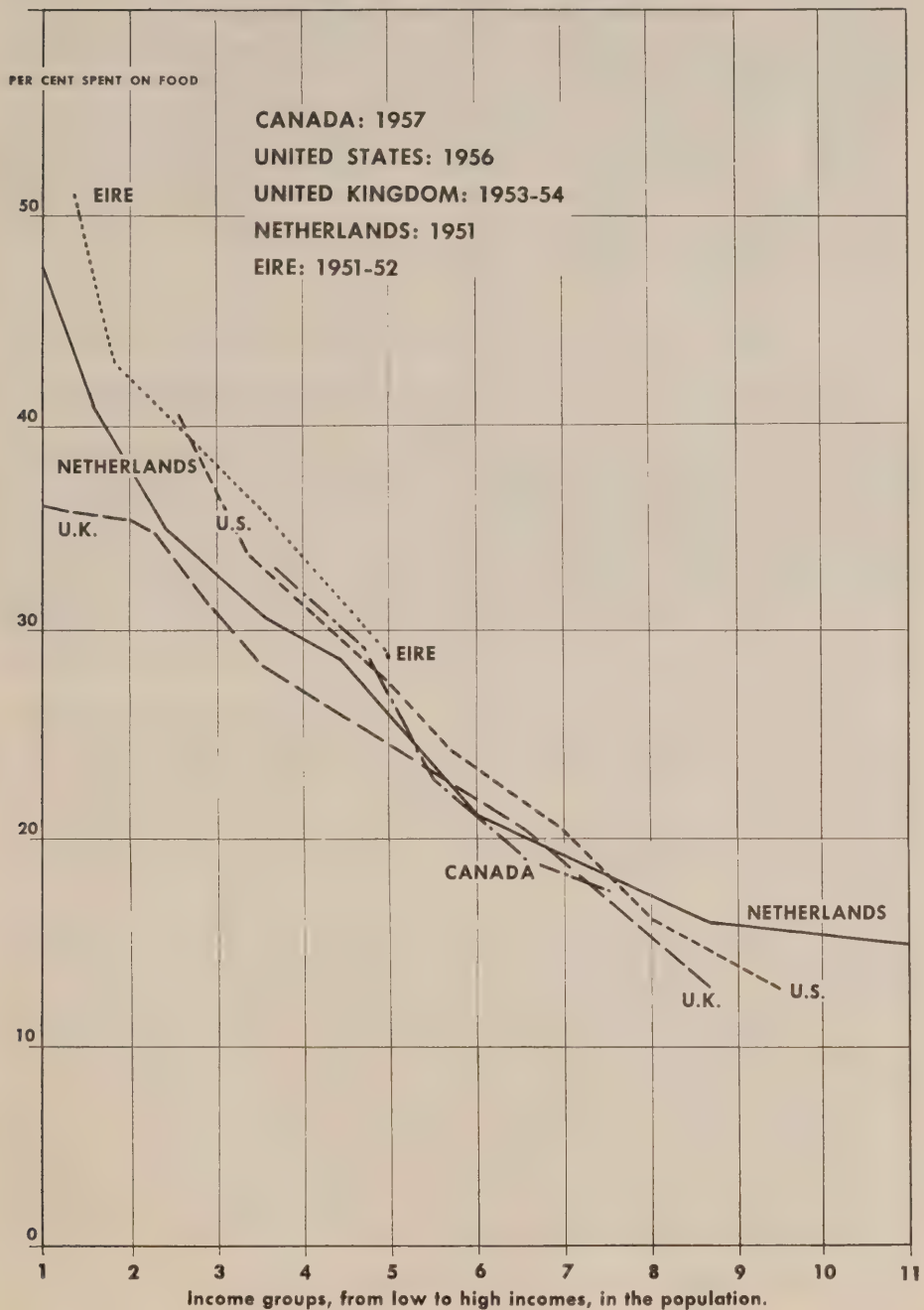
[a]No adjustments have been made for stocks in estimating domestic disappearance. Includes all prepared breakfast foods, e.g., products made from corn, wheat and bran, etc., and unprepared breakfast cereals (i.e., hot cereals) including oatmeal and rolled oats.

SOURCE: D.B.S. *Apparent Per Capita Domestic Disappearance of Food in Canada* and the *Canned Foods Summary*, Annuals.

The persistence of these relations, and the regularities in consumer behaviour which they reflect, is attested to by numerous studies of family food expenditures and of national expenditures in other countries as well as in Canada. The universality of the income-expenditure relations is evident from Chart 15. The stability of food expenditure and consumption in relation to incomes and prices has important implications with respect to the effects of the promotional activities of food merchandising firms. (See Part II.)

CHART 15

FOOD EXPENDITURE AS A PROPORTION OF TOTAL EXPENDITURE BY INCOME GROUPS.



Relevant to this discussion is the statistical evidence we have presented in the preceding tables on rates of consumption. For example, we referred to the large proportion of total expenditures devoted to promotional efforts by cereal product manufacturers. These efforts do not appear to have materially affected the rates of consumption of breakfast cereals in total. The promotions may have influenced the consumer to switch purchases from porridge to dry breakfast cereals, but, over the period we have examined, the annual rates of consumption for all breakfast cereals declined. This decline, moreover, is only a part of a larger decline exhibited in the rates of consumption of all products made from cereal grains. Consumption of all cereal products averaged 202 pounds per person per year for the period 1945-47, dropped to an average of 169 pounds for the years 1948-50, and decreased further to an average of 160 pounds for 1955-57.

3. Retail Food Expenditures for Canadian Farm Products

Our discussion to this point has had reference to total food expenditures in Canada, regardless of the origin of the food or of the outlet through which it was purchased by the consumer. We were directed, however, to look into the spread in prices between Canadian commodities at the farm and food products in the domestic market. To arrive at the measure of consumer expenditures required for our study of the Canadian food marketing bill, we have had to work from the greater to the lesser, i.e., from total food expenditures to expenditures on food of Canadian origin only. By value at retail, about one-fifth of the food supplies of the Canadian people comes from abroad, so that in our analysis of costs of marketing Canadian farm-produced food, which follows, we are dealing only with about four-fifths of the total food supply of the Canadian people.

The Retail Value of Domestic Farm Foods (Table 22) differs from the estimate of Personal Expenditures on Food in the following respects: the value of imported food sold in Canada has been eliminated; the value of fishery products has been eliminated;[1] the value of food consumed on farms where produced, i.e., which does not enter the marketing system, has been taken out; and the value of food served in public eating places has been adjusted to an equivalent value in the retail store.

From Table 22, it can be seen that expenditures on food of farm origin increased by $2,275 million between 1949 and 1958. Of this increase, $1,846 million was spent on food of Canadian farm origin and $429 million on imported food. Over the period prices of imported foods rose more than prices of food of domestic farm origin. Increases in imported food prices occurring in 1954 (coffee) and 1958 (citrus fruits, vegetables) were the cause of most of the general price increase. While by value, suppliers of Canadian food products got about the same proportion (80%) of the Canadian retail food dollar, by volume, Canadian suppliers obtained 81% of the Canadian food intake in 1958 as against 79% in 1949. The impact on the income position of the Canadian farmer and the effect on exports of Canadian farm products are discussed in Chapter 2 of this part.

[1] For a similar analysis of retail value of fisheries products, see Part VI.

Table 22—Personal Expenditure on Food and Retail Expenditure on Farm Foods of Domestic Origin as Related to Total Retail Expenditure on All Farm Food Products, 1949 to 1958

Year	Personal[a] Expenditure on Food	Retail Value of Farm Foods Consumed off Farms	Retail Value of Imported Farm Foods	Imported Foods as a Per Cent of Total	Retail Value of Domestic Farm Foods	Domestic Foods as a Per Cent of Total
	($ million)	($ million)	($ million)	(%)	($ million)	(%)
1949	2,887	2,718	543	20.0	2,175	80.0
1950	3,140	2,979	682	22.9	2,297	77.1
1951	3,619	3,440	736	21.4	2,703	78.6
1952	3,804	3,610	758	21.0	2,851	79.0
1953	3,884	3,708	756	20.4	2,952	79.6
1954	4,030	3,854	819	21,2	3,035	78.8
1955	4,236	4,064	836	20.6	3,228	79.4
1956	4,571	4,409	934	21.2	3,475	78.8
1957	4,920	4,758	959	20.2	3,799	79.8
1958	5,167	4,993	972	19.5	4,020	80.5

[a]D.B.S. *National Accounts, Income and Expenditure.*

Part of the increase of over $1.8 billion spent at retail on Canadian-produced foods represents a shift in sources of supply in Canada itself. As farming has become more specialized, farmers are now buying more of their food at retail rather than producing it themselves. Many persons on small holdings do not grow as much or as wide a range of products as previously, and are, therefore, buying more of their supply of food through the marketing system.

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CHAPTER 2

FARM RECEIPTS

Farmers and their families get their incomes from a number of sources, but mainly from the sale of farm products. In our inquiry we are concerned with receipts from farming operations, that is to say, with the money that farmers realize from the sale of farm products and from other returns, such as government support payments and subsidies of various kinds, which are related to the production and sale of farm commodities. More particularly, we are concerned with receipts from sales of farm food products for use in the domestic market. We need this measure of farm receipts in order to obtain a "total spread" between what the farmer receives for the food materials he sells and what the Canadian consumer spends for the food products derived from these same materials.

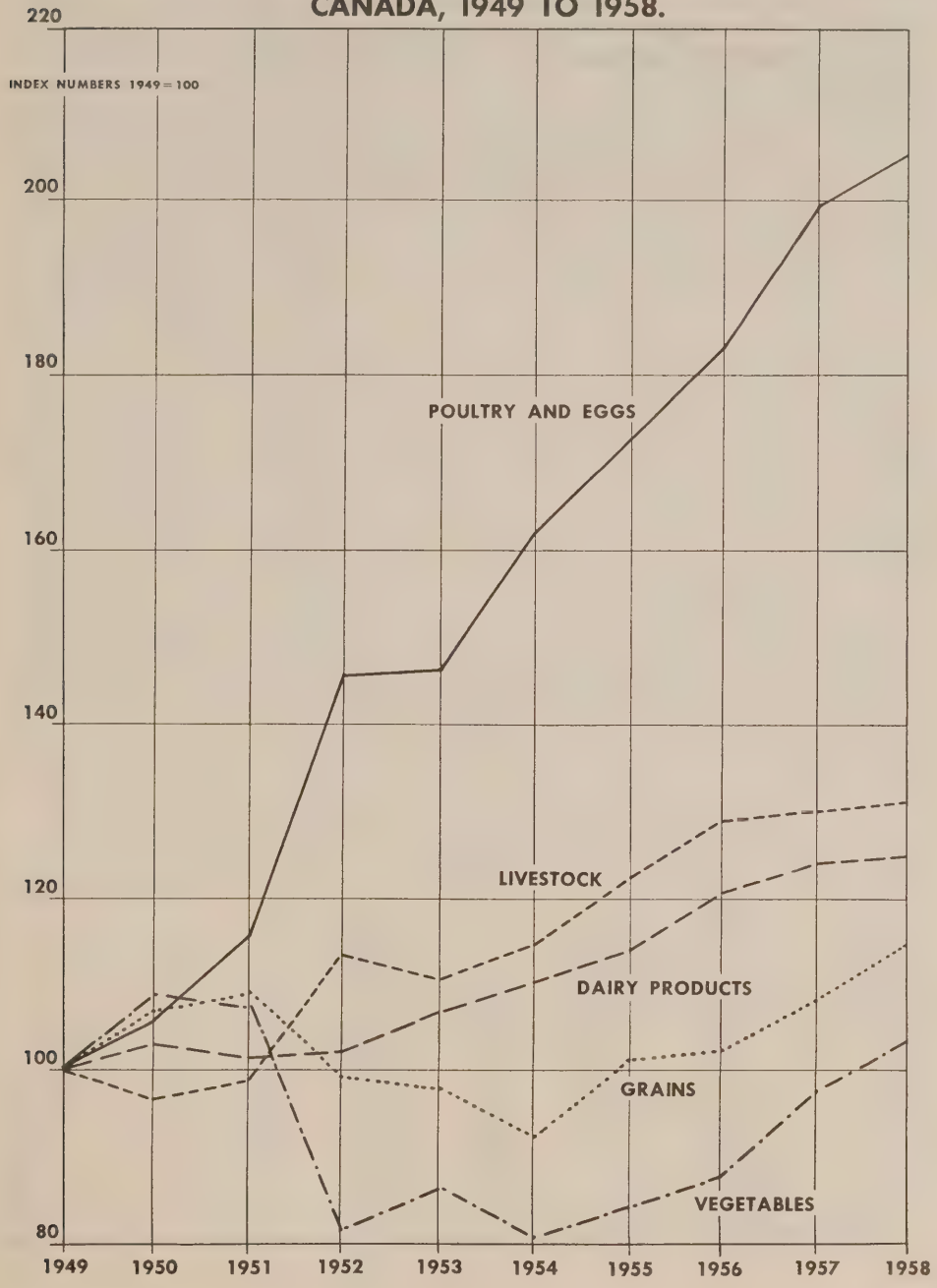
We begin with an official series entitled "Cash Receipts from the Sale of Farm Products". This represents receipts from sales of all products, whether for domestic use or export, and whether for food or non-food purposes. Consequently, we eliminate the sales of all non-food materials and those sales of food materials destined for export. This leaves us with receipts from sales of farm raw materials produced mainly for human food use in Canada. However, very few farm commodities are consumed at retail in the total volume in which they leave the farm. Farm food commodities have three possible end uses: first, as human food, second, as animal food, and the third as a non-food. The portions not utilized for human food are referred to here as by-products; later, in Part V, we deal at greater length with the importance of by-products. In order, however, to arrive at our estimate of farmers' receipts from the sale of food materials *only,* our last step must be to deduct the estimated value of the by-product portion of the raw material.

The estimates of aggregate farm receipts are given in Table 23. Between 1949 and 1958, cash receipts of farmers from sales of food for use in the domestic market increased by $495 million. There was a sharp increase in aggregate receipts to 1951, and then a decline to 1954. Beginning in 1955, receipts from the domestic market again climbed sharply so that the value in 1958 exceeded the previous peak in 1951. The increased proportion of receipts from all sales off Canadian farms attributable to food products sold to Canadian consumers is the result of the expansion of the domestic market both in numbers of people and in their buying power. From 1949 to 1951 inclusive, 60% of the Canadian farmer's cash receipts came from the home market; from 1955 to 1958 almost 65% came from this source. To this extent Canadian consumers have, in the latter part of the period, literally nibbled away the exports of certain farm products.

The relative changes in the volumes of the main groups of food items are shown in Table 24 and Chart 16. The increase in population was 27%. As we have seen previously, the per capita consumption has remained stable. Nevertheless, because of the shift in consumption to Canadian products, the total amount of

CHART 16

RELATIVE CHANGES IN THE VOLUME OF SELECTED GROUPS OF FARM FOOD PRODUCTS PRODUCED AND CONSUMED IN CANADA, 1949 TO 1958.



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all farm products rose by 36% from 1949 to 1958. Poultry meat and eggs more than doubled. Livestock products (mainly the red meats) rose by a little over 30%; dairy products, with a rise of just over 25%, and fruits with an increase of 23%, were just short of the population increase; grains showed only a moderate increase of 15%. Vegetables were the only group with little or no change. This was partly due to a continuation of the long-term downward trend in potato consumption.

Table 23—Farm Cash Receipts From Sales of Food Products to the Domestic Market as Related to Total Farm Cash Receipts, 1949 to 1958

Year	Cash Receipts[a] from Sales of all Farm Products	Cash Receipts[b] from Sales of Food to Domestic Market	Domestic Sales as a Per Cent of Total
	($ million)	($ million)	(%)
1949	2,413	1,333	55
1950	2,144	1,403	65
1951	2,783	1,651	59
1952	2,859	1,557	54
1953	2,786	1,516	54
1954	2,375	1,503	63
1955	2,350	1,550	66
1956	2,642	1,644	62
1957	2,575	1,715	67
1958	2,787	1,828	66
Average 1949-51	2,447	1,462	60
Average 1952-54	2,673	1,525	57
Average 1955-58	2,588	1,684	65

[a]Does not include supplementary payments. See "Farm Income 1926-57", D.B.S. *Reference Paper No. 25*, (Part II) and *Farm Net Income 1958*, Annual.

[b]"Gross" receipts unadjusted for the farm value of non-food by-products.

Table 24—Relative Changes in the Volume[a] of Various Groups of Farm Food Products Produced in Canada for Domestic Consumption, 1949 to 1958

(1949=100)

Year	Total[b] Farm Food Products	Livestock	Dairy Products	Poultry & Eggs	Grains & Pulses	Vegetables	Fruit
1949	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1950	101.9	97.4	103.4	106.5	107.3	109.4	92.6
1951	103.3	98.9	101.1	116.9	109.6	106.9	98.6
1952	111.7	114.0	101.4	145.2	99.8	82.0	104.8
1953	111.5	111.0	107.3	145.5	98.5	86.2	104.0
1954	115.5	114.8	110.4	162.3	92.2	80.5	106.2
1955	122.5	121.9	114.9	173.4	101.0	84.7	124.5
1956	127.9	128.9	120.4	183.0	102.9	87.7	92.2
1957	133.2	130.2	124.9	199.0	109.6	97.7	110.7
1958	135.5	130.5	125.1	205.5	115.1	103.9	123.4

[a] Valued at 1949 farm prices.

[b] Includes other products such as honey, maple products and sugar beets, in addition to the six groups shown.

CHAPTER 3

THE MARKETING BILL

In Table 22 we have estimates of the total amount, in terms of retail purchases, spent by Canadians on food of domestic origin each year from 1949 to 1958. In Table 25 we have, for the same period of years, cash receipts of Canadian farmers from the sale of that portion of the raw food materials which has moved through the marketing system to be purchased as food by Canadian consumers. By deduction we arrive at the Marketing Bill. We reproduce the arithmetic in Table 25 and give for each of the years 1949 to 1958 our estimates of the Marketing Bill. To provide a ready comparison of the relative changes of the several values involved in the estimates of the Marketing Bill, the index numbers are shown in Table 26.

We note (Table 26) that the Marketing Bill has more than doubled in the period 1949 to 1958—a rise of 149%. We note also (Table 24) that during the period there was an increase of 36% in the volume of food materials sold by farmers for use in the domestic market. By dividing the index of the Marketing Bill (249.2) by the index of volume of food entering the marketing system (135.5), we arrive at an estimate that the cost of marketing the basket of food, including the services associated with it, increased by 84% from 1949 to 1958.

As we have made clear earlier, the market basket of food and related services bought by the consumer in 1958 was not the same as in 1949. The basket itself was about the same size, i.e., the weight of food consumed per person was approximately the same. But, while our market basket has not increased in weight of contents and, therefore, is no more difficult to push along the aisle and lift off the cart at the check-out counter, the *kinds* of food in the basket have changed. Part of this change has been to larger quantities of certain more expensive food items, which, even if prices had not changed, would make the total amount of the cash register higher by perhaps 7%. There are certain other

Table 25—Estimates of the Farm-Retail Marketing Bill, Canada, 1949 to 1958

Year	(1) Aggregate Retail Value	(2) Aggregate Farm Value of Raw Materials Food & Non-food By-products	(3) Farm Value of Non-food By-products	(4) Farm Value of Raw Food Materials Only (2) — (3)	(5) Farm-Retail Marketing Bill (1) — (4)	(6) Farm Value as a Per Cent of Retail Value (4) ÷ (1)
	($ million)	($ million)	($ million)	($ million)	($ million)	(%)
1949	2,175	1,333	58	1,275	900	59
1950	2,297	1,403	63	1,340	957	58
1951	2,703	1,651	77	1,574	1,129	58
1952	2,851	1,557	53	1,504	1,347	53
1953	2,952	1,516	45	1,471	1,481	50
1954	3,035	1,503	43	1,460	1,575	48
1955	3,228	1,550	47	1,503	1,725	47
1956	3,475	1,644	50	1,594	1,881	46
1957	3,799	1,715	48	1,667	2,132	44
1958	4,020	1,828	51	1,777	2,243	44

Table 26—Relative Changes in Aggregate Retail Value, Farm Value, Marketing Bill and Farm Value as a Proportion of Retail Value, Canada, 1949 to 1958

Year	Aggregate Retail Value	Aggregate Farm Value of Raw Materials Food & Non-food By-products	Farm Value of Non-food By-products	Farm Value of Raw Food Materials Only	Farm-Retail Marketing Bill	Farm Value as a Proportion of Retail Value
			(1949 = 100)			
1949	100.0	100.0	100.0	100.0	100.0	100.0
1950	105.6	105.2	108.6	105.1	106.3	99.5
1951	124.3	123.8	132.8	123.4	125.4	99.3
1952	131.1	116.8	91.4	118.0	149.7	90.1
1953	135.7	113.7	77.6	115.4	164.6	85.0
1954	139.5	112.8	74.1	114.5	175.0	82.1
1955	148.4	116.3	81.0	117.9	191.7	79.5
1956	159.8	123.3	86.2	125.0	209.0	78.3
1957	174.7	128.6	82.8	130.7	236.9	74.9
1958	184.8	137.1	87.9	139.4	249.2	75.4

differences in the basket and in its contents. We are buying a greater amount of services provided in the marketing system. These services include more parking space, more lights and better lights in the store and parking lot, carts for the children, frozen food cabinets, better preservation facilities for food in the wholesale or cold storage warehouse, more care in the processing of the food, convenient packages, less wastage and so on. With our market basket of 1958, we have about 28% more of these services than we had in the basket of 1949.[1]

We have estimated above that the cost of marketing the consumer's basket of food, including the services associated with the food materials, increased by 84% from 1949 to 1958. We have ascribed 28% of the increased cost to more services associated with the food material all the way from the farm to final purchase at retail. It is clear then that the marketing services by themselves cost more in 1958 than in 1949. The increased cost per unit of service is estimated at 43%.[2]

The indexes of volume of food and services at retail, raw food materials at the farm, and marketing services were calculated after adjustment of the actual dollar figures given in Table 25 to a 1957 dollar basis. These indexes are brought together in Table 27.

[1] Index of volume of marketing services = 173.9
Index of volume of food materials = 135.5
Index of marketing services per unit of food materials = $\frac{173.9}{135.5} \times 100 = 128.3$.

[2] Index of marketing cost per unit of food = 183.9
Index of quantity of marketing services per unit of food = 128.3
Index of cost of marketing services per unit = $\frac{183.9}{128.3} \times 100 = 143.3$
We can arrive at the same measure in the following way:
Index of total marketing bill in 1957 = 249.2
Index of volume of marketing services = 173.9
Index of cost of marketing services per unit = $\frac{249.2}{173.9} \times 100 = 143.3$

When dealing with prices and incomes in Part I, we drew attention particularly to the timing in price and income movements over the period under review. Our analysis of both farm and personal incomes generally in that part referred to averages.

We desire to return in this part of the report to the matter of timing because here, by the use of aggregate statistics, we are able to pick up the net effects of changes in both prices and quantity of food commodities in relation to changes in personal disposable income, retail cost of Canadian farm food products, the marketing bill and aggregate gross receipts of farmers from the sales of food materials for Canadian consumption.

Table 27—Index Numbers of Volume of Food and Services at Retail, Raw Food Materials at Farm and Marketing Services Between Farm and Retail, 1949 to 1958[a]

Year	Volume of Food and Services at Retail	Volume of Raw Food Materials at Farm	Volume of Marketing Services
		(1949 = 100)	
1949	100.0	100.0	100.0
1950	104.1	104.7	103.3
1951	106.3	104.2	109.2
1952	112.6	103.8	125.1
1953	121.2	113.8	131.7
1954	126.4	117.6	138.9
1955	134.5	122.8	151.1
1956	143.8	129.4	164.2
1957	149.5	134.1	171.3
1958	153.7	139.5	173.9

[a]Volume of food and services at retail was derived by deflating the aggregate retail value by a retail price index of foods of domestic origin. Volume of food raw materials at the farm was estimated by deflating aggregate farm value by a farm price index for farm food products retained in Canada for domestic comsumption. Volume of marketing services is equal to volume of food and services at retail (i.e., the deflated retail value) minus the volume of food raw materials at the farm (i.e., the deflated farm value).

In Table 28 we have reduced the aggregates to plus and minus changes from one year to the next. This provides for a direct comparison of year-to-year changes and their timing. While generally the year-to-year changes are reasonably reliable in reflecting the actual sequence of events, we are aware that economic processes flow through time and that arbitrary selection of periods such as calendar years may cut across developments in the flow of income and conditions of supply and demand. Also, we must recognize that some of the differences in the sequence of events between our analysis of the Marketing Bill and the approach to "The Problem" in Part I are associated with differences in our measurements. For example, the farm incomes in Part I represent cash receipts from all sales of farm products minus operating expenses, while here we are dealing with receipts from sales of food products for the domestic market only.

We have attached considerable importance to the strength of demand during the period and, in this connection, we have used "Personal Disposable Income" as the measure of aggregate consumer demand. In looking at Table 28, we draw attention to the changes in Personal Disposable Income and note that these were positive for every year of the period with the greatest increase from 1950 to 1951, a large increase from 1951 to 1952, another from 1954 to 1955,

Table 28—Yearly Changes in Aggregate Farm Value, Marketing Bill, Retail Value and Consumer Incomes, 1949 to 1958

Years	Aggregate Farm Value	Marketing Bill	Aggregate Retail Value	Personal Disposable Income
	($ million)	($ million)	($ million)	($ million)
1949 to 1950	+ 65	+ 57	+ 122	+ 839
1950 to 1951	+ 234	+ 172	+ 406	+ 2,106
1951 to 1952	− 70	+ 218	+ 148	+ 1,278
1952 to 1953	− 33	+ 134	+ 101	+ 832
1953 to 1954	− 11	+ 94	+ 83	+ 80
1954 to 1955	+ 43	+ 150	+ 193	+ 1,345
1955 to 1956	+ 91	+ 156	+ 247	+ 1,824
1956 to 1957	+ 73	+ 251	+ 324	+ 954
1957 to 1958	+ 110	+ 111	+ 221	+ 1,493
Total 1949 to 1958	+ 502	+ 1,343	+ 1,845	+10,751

and large ones successively from 1955 to 1958. In general, these large increases in aggregate demand for all consumer goods and services are in part reflected in the demand for food as is shown in the column headed "Aggregate Retail Value". We note a correlation between income changes and food expenditures, with substantial increases in income reflected generally in substantial increases in "Aggregate Retail Value". As we observed earlier the calendar year may cut across a flow pattern and result in a spill-over of demand from one calendar year into the next. Thus, we find in some instances, from 1956 to 1957, for example, that food expenditures at retail showed a greater increase than in the previous year, although aggregate demand increased at a slower rate.

The impact of demand in relation to timing of changes is likewise reflected back through the marketing system and the farm receipts, although, as we pointed out in Part I, other factors disrupting the normal sequence enter into the situation at times through the period. Substantial increases in both the Marketing Bill and the "Aggregate Farm Value" took place from 1950 to 1951, which, as we pointed out above, was the period of the greatest increase in demand. However, from 1951 to 1954, while increases were taking place in demand and in the marketing bill, farm receipts were declining. We observed in Part I that the substantial increase in farm production became a dominant factor during this period, in Canada as well as abroad.

The fall in farm prices, through 1952 to 1955, would, if no other factors were operative in these years, have caused a decline in farm incomes. But the analysis of the marketing bill suggests, insofar as the domestic market for food is concerned, that the strength of aggregate demand after 1954 gave rise to increases in the total quantity of food taken and that this more than offset the fall in prices. Referring to Table 24, we draw attention to a considerable increase in quantities of products taken by the domestic market beginning in 1954 and continuing through 1958, particularly in meats, poultry and eggs and dairy products. Hence, insofar as gross receipts of farmers from sales to the domestic market were involved, increases started on a modest scale in 1955 and continued through to 1958. In 1957 and 1958, of course, price increases again became a factor.

To summarize: we estimate the increase in the Marketing Bill (1949 to 1958) to be of the order of 149%; and that the volume of food entering the marketing system increased by 36%. It follows that the marketing cost per unit of food increased by 84%. This increase in cost of marketing per unit of food was due to both an increase in the quantity of services associated with each unit of food (28%); and an increase in the cost per unit of the services (43%).

Some Components of the Marketing Bill

There are several ways in which the analysis of the Marketing Bill could be developed. In Part II we described and illustrated the functional components referring to transportation, financing, storing, buying, selling and so on. We also dealt with the structural arrangement in the marketing system and described the present-day organization of the institutions comprising this structure, such as the retailing and wholesaling trade, and the food processing industry. In Part III we examined within the marketing system changes in returns to labour (wages), to management (salaries) and to capital (profits). We also gave attention to changes in tax rates.

We proceed in this section, following consideration of the elements entering into cost of marketing services, to report upon changes occurring over the period in aggregate costs for four functional components; transportation, advertising, cold storage and packaging. We were able to carry out an analysis for these particular components because of the availability of certain basic statistics relative to them. These four components themselves comprise a relatively small part of the marketing bill. The balance consists in large part of labour, profits and taxes which we have discussed in Part III.

In Chapters 1 and 2 we have given attention mainly to those changes in food purchasing habits which in themselves would be expected to result in increases in retail food costs and in a higher marketing cost even if all prices of goods and services had remained the same throughout the period. The changes in question were the change in the kinds of food in the market basket and changes in the amount and kinds of marketing services associated with the food.

In the preceding section, we concluded that the cost of a unit of marketing services had increased by 43%. Marketing services consist of the quantities of capital and labour required to take raw food materials from the farm, and process, store and distribute the food products to the consumer. Capital is represented in the primary assembling facilities (warehouses, sheds, grain elevators, cold storages and so forth), the processing plants, wholesale warehouses and retail stores, as well as some other facilities owned or rented by individuals and firms engaged in food marketing. In addition, there is the labour and management required to operate these facilities—the livestock buyers, the butchers, the flour mill employees, the canning plant foreman, the wholesale clerk and the store owner, to mention but a few of the persons engaged in various marketing activities. But we must have more than facilities and employees. In Chapter 2 we established measurements of the quantity and value of the materials obtained from the farmer. In addition, other materials are needed, such as chemicals for use as preservatives, coal, oil and electricity for operating the machinery and providing light and heat.

Machinery requires repairs; office supplies and equipment are essential for business dealings, and a long list of many kinds of goods and services enter into the expenses of marketing. For example, railroads and trucking firms are paid for carrying and transferring materials and products. Advertising and packaging materials also appear as expense items in the accounts of marketing firms.

All these goods and services used in marketing must be paid for. In addition, marketing firms have to pay their employees, pay interest on money borrowed to erect buildings, and make provision for depreciation of buildings, equipment and so forth.

When we refer, therefore, to the increase of 43% as the increase in the cost of a unit of marketing services, our concern is directed only to the changes in *prices* of units of goods and services used in marketing. Explicitly these would be prices of items such as transporting a ton of freight one mile, an hour of labour, a kilowatt hour of electricity, a ton of coal, a gallon of gasoline, a long distance telephone call between Winnipeg and Toronto, an investment of $100 of capital and so forth through thousands of items. If we had the quantities of each of these items used and the 1949 and 1958 prices, we could construct an independent index, which presumably would show an overall increase of about 43%.

We do not have this sort of price index, but, as indicated at the beginning of this section, we have developed estimates of aggregate costs for transportation, advertising, cold storage and packaging, which show some of the changes that have been taking place over the period 1949 to 1957.

In Table 29 we have brought together the aggregates and indexes for each of the above-mentioned components. The following sections are devoted to an analysis of the changes in these between 1949 and 1957.

Transportation

Aggregate costs of moving food materials and food products in Canada rose from $109 million in 1949 to $245 million in 1957. Thus, total transportation costs more than doubled. In this same period there was an increase of one-third in the quantity of food materials moving through the marketing system. Thus, if haulage rates and distances hauled remained unchanged during the period, we could expect the transportation bill for food to have been at least a third greater by 1957 on the basis of volume increase alone.

But neither haulage rates nor distances hauled have remained unchanged. Transportation costs for moving a ton of food have risen sharply from 1949 to 1957. Several increases in railway freight rates have been put into effect since 1949. There have been accompanying increases in truck rates and in rates for other forms of transportation service such as water and air. But the significant and substantial change in recent years has been the switch in the proportion of food shipped by truck rather than by rail. Table 30 gives the per cent distribution of revenue accruing to the various forms of transportation from hauling food commodities and products from Canadian farms to Canadian retail stores.

The growth in importance of the truck, both absolutely and relatively, as a means of transporting domestic foods to the Canadian consumer has been a factor

contributing to the increases in the aggregate marketing bill. Because this statement is suceptible to misrepresentation, we interject qualification. We are concerned here with the measurement of aggregate costs of transportation as such and have no means of striking a balance sheet to show compensatory savings along with absolute increases in aggregate costs. As we will point out in the ensuing paragraph, costs per unit of moving food by truck appear to have increased somewhat more than costs by rail. But we cannot say to what extent savings in such matters as the amount of handling, convenience, elimination of waste or loss have been realized as offsetting factors to the higher unit cost and higher aggregate expenditure for trucking.

Table 29(a)—Changes in Various Cost Components of the Farm-Retail Marketing Bill, 1949 to 1957

(Million Dollars)

Year	Transportation[a]	Advertising	Cold Storage[b]	Packaging Materials[c]
1949	109	21	5	97
1950	112	26	6	110
1951	134	32	6	126
1952	171	41	6	147
1953	197	51	8	147
1954	190	61	8	160
1955	219	74	9	174
1956	254	90	9	188
1957	245	106	10	211

[a]Total revenues of railways, truckers, air and water transport for farm food products produced and consumed in Canada.

[b]Cold storage costs include costs of handling, freezing and storage. Does not include the cost of storing foods in freezer cabinets in retail stores, etc.

[c]Packaging materials and containers only.

SOURCE: Various Research Studies—for details see Volume III.

Table 29(b)—Relative Changes in Various Cost Components of the Farm-Retail Marketing Bill, 1949 to 1957

(1949=100)

Year	Transportation	Advertising	Cold Storage	Packaging Materials
1949	100.0	100.0	100.0	100.0
1950	103.1	120.2	113.6	112.9
1951	123.6	151.7	102.0	130.4
1952	157.3	190.8	116.9	151.4
1953	181.4	240.6	139.3	151.3
1954	174.5	285.7	146.5	165.3
1955	201.1	347.2	159.3	179.1
1956	232.7	420.6	162.6	193.4
1957	224.9	497.0	175.6	217.8

NOTE: These index numbers were calculated from unrounded data.

Table 30—Per Cent Distribution of Total Food Transportation Costs for Farm Products Produced and Consumed in Canada, 1949 to 1957

Year	Rail	Truck	Air	Water	Total
1949	53.6	43.1	1.1	2.2	100.0
1950	51.6	45.3	.9	2.2	100.0
1951	49.6	47.4	1.0	2.0	100.0
1952	44.5	52.0	1.8	1.7	100.0
1953	38.3	57.6	2.7	1.4	100.0
1954	37.5	59.3	1.8	1.4	100.0
1955	31.9	63.1	3.7	1.3	100.0
1956	31.1	65.3	2.3	1.2	100.0
1957	31.8	64.9	2.1	1.3	100.0

From Table 31 we observe that the increase in truck revenues per ton was greater than for rail, about 110% as compared to 67%. This increase in rates (as expressed by per-ton revenue changes), coupled with an estimated increase in the volume of domestically produced and consumed food carried by truck, pushed total truck revenues upwards to a level at which they accounted for about 65% of total transportation costs against only 43% of the total in 1949. Food shipments by rail did not change in volume to any extent and hence the aggregate cost attributable to the use of rail transportation for food rose only moderately over the period. To the extent that truck transportation has replaced rail and water, total transportation costs and, in turn, the farm-retail marketing bill, have been increased by this shift in types of carrier.

A more recent development in transportation service, which appears to be of some significance to the food industry, is the combination truck-rail ("piggy-back") service. We have been unable to assess the extent of the growth of this type of service in relation to foods only, much less to make detailed measurements of the overall effect on costs. It would appear, however, that the service offers speed, convenience and flexibility which have effected overall savings in per unit costs of moving food, particularly in traffic between major urban centres.

Table 31—Relative Changes in Unit Transportation Costs, 1949 to 1957
(1949=100)

Year	Average Rail Revenue per Ton	Average Truck Revenue per Ton	Total Transportation Costs per Unit of Farm Food Marketed[a]
1949	100.0	100.0	100.0
1950	107.1	97.1	101.2
1951	123.6	107.9	119.7
1952	132.4	135.2	140.8
1953	130.3	161.1	162.7
1954	151.0	151.7	151.1
1955	139.2	175.2	164.2
1956	151.9	203.7	181.9
1957	167.3	209.6	168.8

[a] Derived by dividing the "value-volume" index of farm marketings (Table 24) into the index of total transportation costs, (Table 29 (b)).

When dealing with changes between 1949 and 1957 in the cost of transportation of food, we face a complex of changes in the elements from which the total costs are built up. These are:

(1) Changes in per unit rates for transportation of food materials and food products.[1]

(2) Changes in the type or kind of transportation used. Change to a proportionately greater use of a lower or higher rate-per-unit type of transportation would affect the total cost.[1]

(3) Changes in the total volume of food moved. These would result from population increases and from changes in the amount of food consumed per person.

(4) Within the volume of food moved, changes in the kinds of food being moved. We noted certain shifts in food consumption in Chapter 1. If these shifts are from food materials or food products bearing low transportation rates per unit to those bearing higher rates, then total transportation costs would be increased.

(5) Changes in the distances which the food materials or food products are shipped. These changes could result both from changes in population location and from changes in the location of food production (in processing as well as in primary production).

Because changes of the above nature are taking place continuously, it is impossible to unravel with any certainty the net contribution of each to the total increase in the food transportation bill.

Looking again at Table 31, we draw attention to the index of the costs of transportation per unit of farm food marketed for each of the years 1949 to 1957. This index embodies a complex of elements which change transportation costs per unit of food marketed and, since it is expressed in terms of a unit of food, eliminates

Table 32.—Changes in Average Rail Hauls Per Ton For Selected Farm Food Products: Three-Year Averages, 1949-51 and 1955-57.

	3-Year Averages		
	1949–51	1955–57	% Increase
	(miles)	(miles)	
Cattle & Calves	468	787	68
Hogs	223	389	74
Sheep & Lambs	267	676	153
Butter, Cheese & Eggs	805	1,213	51
Dressed Meats & Poultry	1,252	1,262	1

SOURCE: Based on data in *Annual Waybill Analysis of Carload Traffic*, Board of Transport Commissioners, Ottawa, annuals 1949 to 1957 inclusive.

[1] During this period considerable use has been made of the provision in the Canada Transport Act permitting "Agreed charge contracts". These contracts are an agreement between a shipper and a rail carrier or carriers for a rate to the shipper lower than otherwise would be available for which in exchange the shipper gives a guaranteed high per cent of the traffic Agreed charge contracts have to be filed with the Transport Board and are available to the public It is difficult to make a statistical assessment of their significance and effect upon the general level of transportation rates for food. However, their effects have been in the direction of keeping the general level of transportation rates for food lower than would be the case in the absence of this type of contract.

the 33% increase in the aggregate which is attributable to food volume (see Table 24). It does, however, include a reflection of the change in volume of transportation per unit of product. The increase of from 70% to 80% per unit of food is greater than the increase in rail rates per ton and somewhat less than the increase in truck rates per ton.

A factor contributing to the increased amount of transportation per unit of food is the distance of haul. There is considerable evidence of increases in distance hauled.[1] The important commodities and products in terms of impact on transportation costs for all-Canadian operations are livestock (cattle, hogs and sheep) and meats of these animals, and dairy and poultry products. Changes in average rail hauls for some of these commodities and products are shown in Table 32.

To summarize our analysis of the aggregate of transportation costs in relation to increases in the marketing bill, the following conclusions are presented:

(1) The overall increase in the aggregate cost of transportation in marketing food over the 1949 to 1957 period is attributable mainly to a rise of 69% in the cost of transportation per unit of farm food commodity marketed.

(2) In part, the higher per unit costs reflects a shift in the type of transportation, that is a shift to moving more of the food by truck. (This statement is qualified by our previous remarks regarding possible offsetting savings.)

(3) There has been an increase in the amount of transportation per unit of product. This is due in part to greater amounts of food being moved longer distances to meet requirements arising out of concentration (urbanization) of the population.

In connection with the increase in the use of trucks for moving food, the Commission draws attention to the general growth in traffic congestion as an increasingly important element in the rise in trucking costs. The increasingly large amount of food moved through and within the high traffic density areas bears a proportionate or possibly more than proportionate part of the heavy costs of traffic slow-down. Improvement of traffic conditions and establishment of well-located traffic terminals adequately serviced by roads and highways, and wholesale food market areas would limit increasing transportation costs for food products.

Advertising

We have touched upon the subject of advertising in earlier parts of this report. In Table 29 we noted that during the period 1949 to 1957 advertising increased in aggregate cost from $21 million to $106 million, a rise of 397%. This was by far the greatest per cent increase in any of the functional components of the food marketing bill which we have examined. On the other hand, despite

[1] See *Proceedings*. The representative of Burns and Company referred to the increase in livestock production in the Prairie Provinces and the increase in population in Central Canada and the Pacific Coast as factors contributing to increases in the distance products had to be transported (Vol. 24, p. 3853, et seq.). The representative of Canada Packers put it succinctly as follows: " . . . the centre of gravity of production has moved West, and the centre of gravity of consumption has moved East" (Vol. 26, p. 4081).

the proportionately large increase in the aggregate, advertising appears to account for only about 5% of the marketing bill in 1957, although this is more than double the 1949 proportion. Changes in the distribution of aggregate advertising costs for food are given in Table 33.

The proportion of the total advertising bill spent by processors has been increasing steadily, reaching 80%—by far the largest part—of total advertising expenditures in 1957. (The amount increased from $15 million in 1949 to $85 million in 1957.) This reflects a continuation of the trend to what is known in the trade as "national" advertising. As noted in Part II, a high proportion of this national advertising of food products, as in the case of many other lines of merchandise, is carried out by or an behalf of processing and manufacturing firms. Meanwhile, the relative importance of advertising by both wholesalers and retailers has diminished. Although expenditures by retail outlets as a proportion of the total have declined, changes in retail food marketing during the period are reflected in the estimate of advertising expenditure. Corporate chain expenditures on advertising have increased relative to those of the independent retailers but not relative to those of processors. (The chains' expenditures increased from $2 million to $11 million and the independents' expenditures from $3 million to $8 million between 1949 and 1957.)

Table 33—Changes in the Distribution of Advertising Expenditures Among Institutional Groups of the Food Industry, 1949 to 1957

Year	Processors	Wholesalers	Retailers			Total
			Total	Independent	Corporate Chains	
			(Per Cent)			
1949	72.5	4.9	22.6	12.8	9.8	100.0
1950	73.7	4.3	22.0	12.3	9.7	100.0
1951	76.0	3.4	20.6	11.1	9.5	100.0
1952	76.7	3.9	19.4	8.9	10.6	100.0
1953	77.0	3.9	19.1	8.3	10.8	100.0
1954	77.3	2.9	19.8	8.2	11.6	100.0
1955	77.8	2.2	20.0	8.0	12.0	100.0
1956	79.0	2.1	18.9	7.8	11.1	100.0
1957	79.7	2.3	18.0	7.5	10.5	100.0

In considering the growth of advertising in connection with the food industries, we have been impressed with the expansion of advertising by television, particularly for the promotion of national brands. Television is also being used to some extent by national and regional food retail chains to promote customer patronage. Sometimes this latter use is combined with brand promotion under arrangements between national processors and chain retail organizations. Because television was only introduced in Canada in the early '50's, the increase in advertising is partly a growth phenomenon associated with innovation. The new medium provides for visual demonstration of food uses and an appeal to the palate by the same means. More advertising and increases in advertising rates

over the period have contributed to the overall increase in aggregate food advertising expenditures. Our examination of rates charged for advertising in newspapers, popular magazines and business publications revealed rather moderate increases from 1949 to 1957. A larger part of the increase in the aggregate advertising bill is attributable to the introduction and development of television advertising and to a considerable increase in the volume of food advertising placed in publications.

Cold Storage

Practically all food commodities in their movement from the farm to the consumer undergo some form of storage for periods of shorter or longer duration. It may be only a matter of hours or again it may be a matter of months depending upon the nature of the food products and the marketing conditions. There can be wide variations in the duration of the storage period even for a given commodity, as the marketing conditions vary.

The Commission confined its investigation of change in storage costs to those involved in keeping food commodities and food products under controlled temperatures in public and private commercial cold storage warehouses.[1] There has been a considerable increase in food freezing as a means of preserving products (especially fruits and vegetables), and the Federal Government has assisted in the development of adequate cold storage facilities, which has had its effect on rates for cold storage. There are other important factors which lead us to consider cold storage in particular. Statistics on cold storage holdings are readily available, relatively accurate and complete, and the various series are published monthly in considerable detail and are reasonably consistent for a period of years. Cold storage is the most expensive type of storage per unit of product. In the estimates for cold storage given in Table 29, the costs of freezing or putting products into storage are taken into account along with the monthly rates for storage.

Table 34—Changes in the Per Cent Distribution of Cold Storage Costs Among Various Groups of Food Products, 1949 to 1957

Year	Dairy Products	Frozen Meats	Fresh Apples	Fresh & Frozen Eggs	Frozen Fruits	Frozen Vegetables	Total
				(Per Cent)			
1949	28.0	23.8	22.3	13.4	9.1	3.4	100.0
1950	27.0	20.4	30.0	11.2	7.3	4.1	100.0
1951	24.2	23.6	29.6	6.9	10.0	5.7	100.0
1952	25.1	32.5	18.9	10.0	9.1	4.4	100.0
1953	29.3	32.2	20.0	5.9	7.7	4.9	100.0
1954	33.4	22.2	21.6	7.1	9.0	6.7	100.0
1955	35.7	18.9	21.6	8.0	9.4	6.4	100.0
1956	34.5	23.0	21.3	3.8	8.3	9.1	100.0
1957	27.3	22.0	22.0	9.8	8.3	10.6	100.0

[1] See D.B.S. reports on *Stocks of Food Commodities in Cold Storage and Other Warehouses* for kinds of commodities and types of storage included.

The cost of cold storage for farm products produced in Canada and bought by domestic consumers increased only 76% between 1949 and 1957. This relatively low rate of increase is attributable partly to government assistance in the construction of facilities, which has affected rates, and also to an increased degree of utilization of space. Table 34 below shows the per cent distribution of total cold storage costs among various groups of farm products.

In 1957, cold storage costs for meats, frozen fruits and eggs were a smaller proportion of the total than in 1949. Frozen vegetables were the only group with a higher proportion in 1957. With the exception of frozen vegetables and fresh apples, there has been no marked trend in the quantities of other commodities placed in cold storage over the period. The volume tends to fluctuate with production for most commodities. The total cost of cold storage for frozen vegetables increased 445% and was chiefly a result of the 414% rise in storage volume.[1] A substantial portion of the increase in total cold storage was a direct result of the marked increase in the storage of frozen vegetables.

Storage costs vary with both volume and unit charges but, generally, there were only moderate changes in the rates of handling and freezing and storage. Volume was the chief factor contributing to the increase in total cold storage costs over the period.

We cannot close our discussion of storage costs without further reference to the costs arising out of the increase in volume of frozen foods during the 1949 to 1957 period. Insofar as frozen foods are to be held at low temperatures during their movement through the marketing system prior to retail, the costs are for the most part taken into account in the estimates in Table 29. For the further period of storage and display at retail, there has been a major development in frozen food cabinets. The expenses of buying and operating these, of course, show up in the debit column of the retail store. The importance of the frozen food business and its rate of growth are shown by the results of a recent survey[2] which yielded a count of 421 different frozen food items in Toronto chain stores. This count showed the number of items to be 40% higher than the year before.

At the beginning of this chapter we referred to the shifting of functions and services back and forth within the marketing system and the resultant difficulties this created in measuring the incidence of where or on whom the costs actually fell. In Chapter 1, we mentioned the increase in mechanical refrigeration in the home. Some part of this is attributable to the availability of frozen foods and on this account part of the cost incurred in the home for purchase and operation of cold storage cabinets can be regarded in fact as a transfer of that cost out of the marketing system to the consumer.

Packaging

Packaging of food products takes many forms, and requires many methods of enclosure. It takes place at all stages within the marketing system and outside the marketing system proper as was described in Part II. Some products are wrapped or packaged before leaving the farm. On the other hand, the consumer

1 Measured in pound-months.
2 *Canadian Grocer,* April 25, 1959, p. 30.

may undertake certain packaging operations when the products are brought home from the retail store. For example, food may be packaged after purchase for storage in a home freezer. While on this subject we digress to pay a compliment to nature for many excellent packaging accomplishments in the form of outer protective coverings such as the shell on eggs, the hide on the steer, or the skins on many fruits and vegetables.

There are three principal functions of packaging. These are:

(1) To protect the product against deterioration or contamination. Insulated containers for ice cream and fresh fruits are examples. Milk cartons and bottles are sealed against dust and bacteria.

(2) To provide convenience in transporting, storing and using the article throughout marketing and to consumption. Size, shape and strength of container enter into consideration here.

(3) To provide the information to the buyers and users of the product necessary to informed and intelligent purchasing and use. This information may be printed as an integral part of the package or separately attached to the package by a label. This aspect of packaging has assumed greater importance as the retailer-consumer relationship has become less personal. In this conveying of information to the purchaser, the essentials are:

(i) The kind, composition and quality of the product;
(ii) The net quantity in accurate and meaningful measurements;
(iii) Its uses and how it may be prepared or served for various uses;
(iv) Any particular instructions required in handling or storage to protect the contents;
(v) Where feasible, the contents visible in their natural appearance;
(vi) Last, but not least, wherever possible, provision for a write-in or stamp-in (at the end of the marketing chain) of the unit or package price.

While we have restricted the above classifications to the essential functions of packaging, and have in this way narrowly defined the information aspects, we find it difficult to deal with this subject in a realistic way without reference to the promotional aspects of packaging. The transition stages from informational services to promotional activities in packaging leave a wide area in which we have found classification most perplexing.

In connection with the use of packaging as a means of promotion, regard must be given to (1), (2) and (3) above, but, in addition, other factors rank high in importance. These include appeals to the consumer through package design, including shape and embellishment by colour, decoration, lettering, and also and not infrequently, through the utility of the package for other things after the food contents have served their purpose. Promotion by means of packaging employs many devices, some of them bordering upon deception, including use of optical illusion, both as to quality and quantity of contents, inclusion of "gimmicks" along with the food, and so forth.

We have directed this special attention to the packaging function because of the numerous complaints about packaging costs, promotions, "gimmicks" and

inconveniences, especially from representatives of consumers.[1] While no direct evidence was submitted by these representatives on the extent to which increased packaging and increased costs of packaging had increased the marketing costs and hence the price spread, certainly the inference that costs had been increased was intended. It remained, however, for particular industries and notably that of cereal products to provide an outright admission that their costs had increased because of the increase in packaging costs.[2] The expansion of competition into this particular form of promotional activity is viewed by the Commission, therefor, as one of the causes of increases in marketing costs and thereby a contribution to the widening of the spread.

Before discussing our measurements of the aggregate of packaging costs in the marketing bill, we comment upon some of the components entering into total costs of packaging and consider certain economies associated with packaging. Packaging operations in general require materials, labour on the packaging line or in the packaging operation, packaging machinery, power, light, and other items of operating expenses as well as a share of general overhead arising from the utilization of plant space, fire protection and so forth. When packaging operations are segregated from the production and assembly lines, total packaging costs can perhaps be measured fairly accurately. In many instances, however, the packaging job has become an integral part of the production line; sometimes the package-making or package-assembling machine itself is part of this line.

In recent years packaging machinery has become more intricate and more expensive. In addition, when packaging becomes enmeshed in promotional activities, changes in package size and design make obsolescence a major factor in the depreciation rate of packaging machines and equipment.[3]

To this point, our qualifying comments on the measurement of packaging costs have dwelt upon the problem of obtaining inclusive coverage of all costs associated with the operation. But we must give regard to the other side of the coin, that is to the savings effected, not only to the consumer but throughout the marketing system in waste reduction, convenience in handling and storage, and quality maintenance. Certainly changes in packaging which have permitted mechanization in the handling and assembling of materials in processing, wholesaling and retailing have contributed to reduced labour and other costs per unit of product. Once again all we can do is recognize these qualitatively—the net effects of increases and decreases in cost attributable to packaging are incorporated in the total mix of costs represented by the aggregate marketing bill.

In our measurement of the costs of packaging we have restricted our consideration to the costs for materials and containers. Statistics on expenditures for these are collected annually by the Dominion Bureau of Statistics from the food processing industries, and, using these data together with other information, we arrived at the aggregate figures given in Table 29. We repeat that these estimates

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1 See *Proceedings,* submissions by National Council of Women and Canadian Association of Consumers, Vol. 2, pp. 277 and 298; Vol. 13, p. 2170; Vol. 15, p. 2388; Vol. 26, pp. 4124 and 4312.

2 See *Proceedings.* A representative of the Prepared Breakfast Food Section of the Quaker Oats Company of Canada, Limited, said: "Packaging costs from 1949 to 1957 have advanced approximately 52%". (Vol. 28, p. 4456.) Also see our reference on p. 138 to statement by a representative of Burns and Company on this point.

3 For further comments on the factor of obsolescence see *Proceedings,* Vol. 28, p. 4459.

do not include labour, machinery expense and so forth. Although an increase of 118% between 1949 and 1957 is indicated, this increase in total cost of packaging materials is less than the rise in the total marketing bill (Table 26). Related to our measure of the increase in amount of food put through, the increase in cost of packaging materials per unit of food over the same period was 64%.[1] Price increases in materials and containers and increases in the volume of food put through have played major roles in the increasing aggregate cost of food packaging materials and containers.

The amount of packaging per unit of farm product has increased. At the same time, the volume of food products requiring some amount of packaging has also increased. Most of the expenditure on packaging materials and containers has been incurred by food manufacturers (processors) although there might, with the growth of the chain store, have been an increase in the amount of packaging performed at retail since 1949. As an offset to this, however, the decline in movement of many food materials in large containers (bags, barrels) through to retail has eliminated much repackaging that used to take place at retail. The ladle, scoop, and grocery store scale, together with wrapping papers, string and various sized paper bags no longer clutter the grocery store counters and shelves.

In summarizing our review of increases in packaging costs as a factor in the increasing marketing bill, we conclude that, on balance, the attention directed to this matter as a highly significant contributor to the overall rise in aggregate marketing costs tends to be exaggerated in the views expressed to the Commission. But we do not dismiss increased packaging as a reason for sharp increases in marketing costs for certain items, or alternatively for the failure of consumer prices to fall in certain lines of food commodities, and especially where raw food materials prices have declined. For some commodities, the marketing behaviour of processing and distributing industries and firms has been characterized by substantial amounts of promotional activity in which packaging and the promotional devices associated with it have been prominent.

[1] A representative of Burns and Company stated in regard to their experience: "From 1949 to 1957 the increase in cost of packaging materials has risen by some 49% per pound of product sold". *Proceedings,* Vol. 24, p. 3841.

CHAPTER 4

GOVERNMENT SERVICES AND FOOD MARKETING

Government activities have been an influence upon all sectors of the Canadian economy. In the food marketing system particularly, government activities and assistance have a considerable bearing upon operations at all levels, from the farm to retail. The activities of governments in the food marketing sector reflect in large part the concern of the public which arose initially out of the desire for an assured and safe food supply.

Farmers, business operators and consumers pay taxes; in return they receive services provided by governments. These range across a wide variety of activities. Many of them, although general to the whole economy, may be regarded as contributing in one way or another to improving efficiency and lowering costs in the food marketing system. We could not possibly extract the portions of the many multiple-purpose services such as those to transport (roads, policing), to communication, to education and technological development which aid food marketing in the course of their general performance.

We suggested that, in return for taxes paid, the community received services from governments. This statement can be accepted to a greater or lesser extent depending upon the reservations and qualifications which each of the readers may wish to attach to it based on their own experiences, satisfactory or otherwise. In referring to services there are two general groupings of government activities. The first group involves the making and enforcement of laws and regulations which, in general, facilitate the functioning of the economy and social order. The second grouping of government services includes direct assistance by way of matters like market information, research and actual participation in such matters as inspection and grading. Inasmuch as these activities are necessary, they would, if not provided by governments, be reflected in increased costs in food production and marketing, to be borne directly by the consumer.

There are many activities and services which, we can say with some assurance, are developed with the direct object of assisting food marketing. As a general rule, these are provided by governments and, in most instances, revenues are incidental and fail by a considerable margin to cover the costs of the activity. For example, local governments often provide and supervise farmers' market areas. For the use of these facilities, only nominal rentals are collected.

While practically all governments, municipal, provincial and federal, are engaged in some form or other of assistance to food marketing, segregation of expenditures for these purposes in their financial statements varies considerably. Certainly, it becomes more difficult to segregate special categories of expenditure, proceeding from senior to junior levels of government. At the lower end, the village constable may enforce retail store or market by-laws, while at the senior level an employee's only duty may be daily inspection of a particular farm product.

We find, furthermore, that the food marketing system benefits from a number of governmental activities generally available to producers, marketing firms and

consumers. These include regulations under which the whole economy is carried on, and of paramount importance are those laws and regulations designed to preserve freedom of competition.

Most certainly, governmental contributions by way of assistance in all its many forms would amount to a substantial sum. This is covered, in part of course, by way of property, income and other taxes raised by various levels of government from tax levies on persons and firms. Insofar as our marketing bill estimate reflects these taxes, it includes a portion of the marketing services provided by governments. We are unable to strike a balance on the net benefit of government services to food marketing; similarly we are unable to estimate the actual cost based upon the difference between government tax levies and incidental receipts from services provided in respect to food marketing.

PART V

COMMODITY PRICE SPREADS

1. Introduction

During the public hearings, the Commission received representations containing references to measurements of price spreads for individual commodities. In most instances the evidence on price spread measurements was taken from studies [1] carried out in Canada, although in a few instances references were made to United States studies.[2] A number of the briefs referring to price spread studies and quoting evidence from them were presented by farmers' organizations whose interest in price spread information was more particularly directed to commodities moving into the domestic food market. References to price spread measurements were, for this reason, more frequent in regions supplying the home market. In the Prairie Provinces, producers raised certain other issues relating to the farm problem which, although not without interest to us and of concern to the farmers, we considered to be outside our terms of reference.[3]

Consumers and consumer representatives did not make commodity price spread measurements a strong or central theme in their briefs. Although their direct references to spreads were few in comparison with the producers', the consumers did exhibit concern about particular matters within the marketing system, such as packaging and promotional activities, that were operating to increase the marketing margin. But their approach laid greater emphasis on the way these activities affected levels of food prices at retail rather than on their effects on the farmer's share of the consumer's food dollar.

Recognizing the current interest of farmers in price spreads commodity by commodity, the Commission at its early meetings reviewed material available in this field to determine to what extent it would be useful in pursuit of our inquiry. The most comprehensive statistical information on this matter for Canada is available in a series prepared by the Economics Division, Canada Department of Agriculture.[4] The series, originally including nine commodities,

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[1] See F. N. Hillhouse and F. M. Schrader, *Marketing Margins for Selected Canadian Agricultural Products, 1935-49*, Sept. 1950. Also see issues of the *Economic Annalist*, Canada Dept. of Agriculture, as follows: Oct. 1950, June 1952, Aug. 1954, June 1956, June 1957 and Aug. 1958. A number of special studies with particular reference to provincial and local situations have been undertaken. For examples, see: A. W. Wood, "Market Margins for Beef in Manitoba, 1935-57", *Research Report No. 2*, Dept. of Agricultural Economics and Farm Management, University of Manitoba, Winnipeg; our *Proceedings*, Vol. 16—submission of the Government of the Province of Ontario, pp. 2649 et seq. for details of price spreads on potatoes, turnips, celery, carrots, onions, apples, butter and eggs; *Proceedings*, Vol. 1, pp. 48 et seq.—submission by representative of B.C. Federation of Agriculture—price spreads on various commodities; and *An Economic Study of the Wholesale Marketing of Eggs in B.C.*, University of British Columbia, 1949.

[2] *Farm-Retail Spreads for Food Products*, Miscellaneous Publication No. 741, United States Dept. of Agriculture, Washington, Nov., 1957.

[3] See *Proceedings*, Vol. 5, p. 675—submission by representatives of the Alberta Federation of Agriculture; *Proceedings*, Vol. 8, pp. 1317-24—submission of the Saskatchewan Wheat Pool.

[4] Published annually in *The Economic Annalist*.

was first published in 1950, and covered the years 1935 to 1949 inclusive. In 1954 the series was expanded to 12 commodities, and in 1956, to 14. Revisions for past years have been undertaken periodically.

The Commission, after reviewing the results of these studies, decided that a more detailed analysis than was available in the series referred to would be necessary for its purposes. The Commission, therefore, began a program of commodity price spread studies. The knowledge and experience on commodity matters available among officers of federal and provincial government departments and of the private food trade were drawn on. The objective was to achieve as much comparability as possible of price spread measurements for each commodity over time, as well as comparability between commodities. The Commission was interested not only in the size of the various price spreads, but also in the changes occurring in the spreads over the last decade. This required the assembly of both qualitative and quantitative information regarding the state and conditions of production and distribution, and also information on the demand situation, for each commodity.

2. A Working Definition of a Price Spread

The Commission decided that, for the purposes of calculating commodity price spreads, the following working definition would be applied: a price spread is the difference between the price received by the primary producer for a unit of a food commodity and the price paid by the consumer, i.e., the retail price, for the equivalent amount of product from that commodity.

The price spread as defined above may be subdivided to show in money values the spread at different stages or steps in the marketing system, such as from the farm to processor, farm to wholesale, or wholesale to retail. When the farm-retail price spread has been calculated in money terms per farm unit, a further calculation provides a measure for inter-product price spread comparisons. It also provides another basis for comparison of the price spreads on the same product over a period of time. This further calculation consists of expressing the price received by the farmer as a per cent of the price paid by the consumer, and is referred to familiarly as the "farmer's share of the consumer's dollar". We will elaborate on the significance and usefulness of this method of expressing price spreads in a later section.

3. Problems in Calculating a Price Spread

At an early stage in our program of price spread investigations we had to make certain decisions about procedure. The statistical results from commodity price spread studies have a ready public appeal and acceptance. However, some confusion and misunderstanding in the use and interpretation of price spreads have arisen out of the complicated statistical procedures involved. In this section we begin by referring to two situations, illustrated by hypothetical examples, in order to set out the nature of the problems involved in taking account of price and quantity changes in a price spread calculation.

If all food commodities moved from the farm through the marketing system intact to the consumer at the retail counter without change in weight or volume, then it would be possible to make a direct subtraction of the price received by the farmer from the price paid by the consumer at retail to obtain the desired price spread. But such instances are, for the most part, exceptions to the general run of marketing situations. Those which do occur are mainly transactions between farmers and retailers and then to consumers; the products are standardized and no processing is involved. More general by far are the marketing situations in which only a part of the material sold by the farmer reaches the consumer at retail.

The two types of situations to which we referred arise out of the existence of waste and by-products. These two types of situations are in principle the same. We will proceed to distinguish them, however, because of a difference in the adjustment procedures involved.

In our first example we assume that there are no costs involved in marketing other than waste. A dealer[1] buys 100 units of a raw food commodity from the farmer, paying a price of $1.00 a unit. His total payment to the farmer is, therefore, 100 units times a price of $1.00 per unit which equals $100. The dealer finds, however, that before he can offer the product to the consumer he must sort and discard the units which have spoiled or which for other reasons cannot be sold. In the sorting process, 10 of the units are discarded as waste, leaving 90 units to be sold at retail. Now if he is to recover in full the payment made to the farmer the dealer's price per unit to the consumer must be $100 divided by 90 units which equals $1.11 per unit.

Returning to our working definition, we calculate our price spread in this case as the retail price, $1.11 per unit, minus the price received by the farmer, $1.00 per unit which equals a *price* spread of 11¢. But have we made a comparison of prices at the farm and retail ends of the marketing system for the same units? We have not, because the price we have used at the farm was applied to 100 units while the price at retail applied to only 90 units. Our procedure, therefore, is to adjust the retail price quotation quantitatively to account for the waste portion. This is accomplished by taking the ratio of units at retail (90) to units leaving the farm (100) times the retail price $1.11 ($90/100 \times \$1.11$) which yields a retail equivalent value (price) of $1.00. As a consequence, the spread between the retail equivalent value and the farm price becomes $1.00 minus $1.00 = $0.00. Our conclusion in this example is that the price spread is zero.

Our second example shows our adjustment procedure for by-products. We assume that there is no waste and that no other costs are involved in marketing the product. The dealer buys 100 units from the farmer paying a price of $1.00 per unit, and gives to the farmer a total payment of $100. Of the 100 units bought, 90 units are suitable and acceptable for sale as food at retail. The remaining 10 units have a use for sale as fertilizer. The dealer sells these at 50¢ per unit to a fertilizer plant and receives a payment of $5.00 for them. Now out of the payment of $100 to the farmer he has recovered $5.00 and the remainder of $95 has to be recovered

[1] In this example a dealer represents any middleman or group of middlemen in the marketing system between the farmer and the consumer.

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from the consumer at retail. He has for sale at retail 90 units and his *retail price* must, therefore, be $95 divided by 90 units which equals $1.05 per unit.

While the farmer sold 100 units of raw material, only 90 of these units were actually food materials, however. The portion of the total payment he received attributable to the sale of food materials was the total $100 minus $5.00 for 10 units of by-product, which equals $95. We divide $95 by 90 units and arrive at a calculated farm value (price) per unit of $1.05. Picking up the retail price per unit of $1.05 and substracting from this the adjusted farm value (price) per unit of $1.05 results again in a price spread of zero.

The difference in the two examples should be distinguished: the by-product adjustment in the second example is made in relation to the farm price and the quantity of raw food material leaving the farm; in the first example, the adjustment for waste is made to the retail price based upon the relation of the quantity sold at retail to the quantity of food material leaving the farm.

If, in our second example, the 10 units had been sold for another food use, we would, if the purpose is to determine the price spread on a *particular* retail food product, proceed with the same calculation as for the non-food by-product. If we wanted to derive a combined price spread on a series of final products derived from the same raw food material, we would combine the various prices at retail in their appropriate proportions by weight or volume and compare this composite retail price with the price received by the farmer.

This point is illustrated explicitly in some of the price spread studies presented in a later section. For example, it will be noted that our study of beef price spreads is based upon a comparison of the farm price for the live beef animal with a composite retail price for five cuts of beef combined so as to represent the proportionate cut-up of the edible part of the carcass into all the fresh retail cuts. In contrast, in our study of potatoes we have compared the price received at the farm with the price of a specific grade and quantity sold fresh at retail.

In the examples we have assumed no costs in the marketing system other than waste. Obviously, retailers, wholesalers, processors and assemblers of farm products have to obtain something to live on as well as payment for their services and other services provided such as fuel, light and taxes. All of these costs enter into the price spread. Where we have available prices at various stages in the marketing system such as those charged by processors and wholesalers, we can obtain a measure of the price spreads from step to step or stage to stage. It follows that as the information on prices at different stages in the marketing system increases, the greater the possibility becomes of increasing the detail available in the price spread analysis.

To summarize the procedure: our starting point in a commodity price spread calculation is a comparison of the price received by the farmer and the price paid by the consumer at retail. Next, we ascertain the kind and quantity of the product sold by the farmer and the kind and quantity of the final product bought by the consumer. Then we adjust for waste and by-products. In more complex situations we combine quantities of similar food products made or derived from the same raw food materials in their proper proportions at retail to give a composite price.

Some examples of the number and variety of products and by-products derived from single farm raw material sources indicate the complexities in making appropriate adjustments in physical quantities of raw materials. An egg is an egg at the farm; at the grading station it can be classified in any one of 13 categories and at retail in one of seven grades. These grades have different uses and the uses vary from time to time as prices vary. Apart from grades there are a series of egg products which can be purchased, including fresh eggs, oiled eggs, dried eggs, frozen eggs and egg melange. Eggs may also become constituents of retail products such as bread, cake mixes or ice cream.

The complexities of price spread measurement increase not only in proportion to the increase in the number of food products derived from a single farm commodity, but also in proportion to the number of non-food products derived from the same farm commodity. For example, a steer carcass yields at least 36 cuts of fresh beef at retail, not to mention a large number of processed beef and beef products, canned and dried beef, soups and broths, as well as certain of the edible offals (liver, tongue, heart). A steer of 1,000 pounds may yield 500 pounds of meat and 500 pounds of other materials, a large proportion of which become products or constituents of products including leather and leather goods, soaps, fertilizers, pet foods, glues and so forth. The meat packing industry has developed a high degree of utilization of what formerly were waste materials. Advances in the utilization of raw materials have been made in many food processing industries in recent years. These developments in raw material utilization, despite the complications which they introduce into price measurements, have had offsetting effects to increases in marketing costs. However, the complexities of processing end-products and by-products, both food and non-food, from raw food materials result in serious problems of identifying the raw material content in final products and reduce the feasibility of quantitative measurement.

The main problems in adjusting for by-products and waste are related to the difficulties in obtaining adequate information on the physical quantities or proportions of the farm raw material which fall in these categories. Waste and the utilization of the by-product portions vary widely from commodity to commodity and within commodities from season to season, and region to region. They vary also with the capabilities of individual entrepreneurship within the marketing system, and with the size and kind of equipment in processing plants, assembling and storage warehouses and retailing establishments. For example, a small local butcher might have to dispose of some useful by-products as waste which, in a centre with a concentration of packing plants, might be sold to a specialized by-product processing plant.

Basic to adjustment calculations in price spread measurements and analysis are "conversion factors". A conversion factor is an arithmetical expression (per cent, fraction or decimal) of the amount of product obtained from a given amount of raw material or conversely, of the amount of raw material required to produce a given amount of product. Conversion factor information is available from many sources such as, for example, special laboratory tests (amount of butterfat in a pound of milk), production records (gallons of apple juice from a ton of apples), and special tests (weights of various cuts of meat from a beef carcass).

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Sometimes the conversion factors represent statutory weights or measures as, for example, a conversion factor for a bushel of wheat to 60 pounds, which is an official Board of Grain Commissioners' specification.

In any event, whether the conversion factors are based upon scientifically devised tests or statutory requirements or are just generally accepted, they are most necessary. Many of the commonly used conversion factors applicable to farm and food products and other agricultural items are available in an official publication.[1]

Current conversion rates are important because slight differences in the rates can have a definite effect on the outcome of the price spread measurement. Because the use of inappropriate or incorrect conversion factors can lead to quite misleading results, it is necessary that conversion rates be adjusted when technology in food processing and distribution is undergoing rapid and abrupt change. It is also important that when the change in conversion rates has been gradual, this change be distributed appropriately over the time period, rather than having the accumulation reflected at a single point of time in a price spread series.

When the producer sells a raw material from the farm he receives a composite price which reflects the values of all the usable parts of the raw materials for which he was paid. Some parts may be very valuable as in beef, for example, the five to seven pound of filet mignon currently retailing at $2.30 per pound in sharp contrast to some other part, for example, the approximately 20 pounds of water which are lost from the carcass in the chilling process and for which no financial recovery is made.

In measuring a price spread in which non-food by-products are involved, we have to isolate that portion of the price paid to the farmer for the raw food constituent corresponding in quantity to the retail food products. In order to do this, we must try to locate points in the marketing system where the non-food materials are priced. Some of these non-food by-products may be traded in large volume, and so reasonably satisfactory prices can be obtained for them. Others may be processed in the same plant as the food materials component but may not reach a pricing point till they are finished products. Not only does the establishment of suitable prices for by-products present problems, but even when the by-product prices are available they must be adjusted to a farm value. In order to carry out this adjustment it is necessary to assume that price relationships at certain stages or steps in the marketing system can be carried back to the farm level. For example, if the by-product and food product prices are available at wholesale, then a ratio between the value of by-products and the total value of food and by-products can be calculated and then applied to the farm price.

In our discussion up to this point of problems in calculating price spreads we have examined the difficulties occurring when a large number of products are marketed from a single raw material. This large number of products may include different grades and qualities for each product and even a range within each grade or quality. We have also discussed the treatment of waste and by-products and, particularly in connection with the latter, we referred to certain statistical difficulties.

An important, if not the most important, prerequisite for the computation of commodity price spreads is the availability of the required statistics. Further-

[1] *Canada Weights, Measures and Conversion Factors for Agricultural Products,* Marketing Service, Economics Division, Canada Dept. of Agriculture, July 1954.

more, if the results of the computations are going to serve their most useful purpose, it is necessary to have a reasonably continuous and consistent price spread series over a period of years. It follows, therefore, that the basic statistical series entering these computations must be continuous and consistent. Unfortunately this is not always so.

Interruptions in statistical series occur, many of them beyond the control of the statistical collector. Definitions are changed to follow changes in grades, brands and specifications for a commodity. To a greater extent it is becoming difficult to maintain the identity of a product through the marketing system. Some products may be upgraded from the status in which they left the farm while others may be downgraded as they move through the marketing system to retail. Thus identification for purposes of price comparisons must be closely watched. At points in the marketing system between the farm and retail it is becoming more and more difficult to pick up a price representing the outcome of most or all of the transactions. There may be several different prices for an identical product depending upon the specific terms and conditions applying to each sale.

We have mentioned problems in connection with price statistics. The problems in obtaining adequate and pertinent statistics on the market flow and utilization of commodities and products are even greater. Information on physical quantities used and the quantities of output in the marketing system are necessary for several purposes in the computation of a price spread. We have mentioned their use for developing and maintaining conversion ratios. They are needed also as a means of weighting prices.

The Commission is aware of the problem faced by government and private statistical agencies in trying to meet the rapidly growing needs and demands for statistics from both the government and private sectors of the economy. With relatively fixed or slowly expanding resources, statistical agencies have had to concentrate upon and develop those series most needed for well-defined and recognized purposes. In such circumstances some interests may not be as well served for particular purposes as might be desired. Among these price spread measurement could be included. However, there are also other interests using many of the same series of statistics which have, perhaps, equally valid if not priority claims to improve service. Further references to this matter are contained in our "Conclusions and Recommendations".

We have referred in our discussion to problems in the collection and assembly of statistics and the problems in adjusting for waste and by-product yields. Another problem in price spread analysis arises in regard to the treatment of "time lags". This problem again is a variable one from commodity to commodity. Its importance in each case is related to the relative speed at which a commodity moves through the marketing system to the purchase of it as an end-product at the retail counter. Generally, the time-lag problem is most pronounced in commodities which are storable for relatively long periods and for which unit storage costs are relatively low in relation to per unit prices. For example, deterioration in the freshness of fluid milk sets in rapidly. Except in certain circumstances, fluid milk reaches the consumer in from 24 to 48 hours after leaving the farm. In this case the price received by the farmer and the price paid by the consumer are, with few exceptions, reasonably comparable at one point of time. In contrast, grain sold by the farmer

may be held in storage for many months. In a period when prices are changing the price paid by the consumer at a later date for an article processed from the same stored grain might reflect the price being paid for grain (the raw material) at that time rather than the price originally paid to the producer. In arranging the price data, therefore, it is desirable to take account of the normal periods of commodity sales from the farm and the normal periods for which sales of identical units of the product take place at retail. This requires adequate information on the flow of commodities through the marketing system. Distortions in price spread measurements may result from failure to take account of time lags or from exceptions in the normal lag. The extent of difficulties with time lags is related also to the frequency with which both farm and retail prices change. The practice of computing commodity price spreads in terms of averages, although convenient, obscures particular situations which may vary considerably from normal due to shifts in time lags.

Generally, food price spread measurements have been calculated and published using annual average data although, as mentioned earlier, some work has been done on seasonal measurement. Reasonably accurate results from a seasonal computation depend upon reliable statistics of seasonal commodity flows and corresponding price data. To the extent that price spreads are affected by seasonal variations in supply and demand, it is important that a seasonal analysis be carried out whenever possible. For some of our commodities the seasonal changes have been examined, and the results are reported in the individual commodity summaries.

We recognize the usefulness of an average as a device for simplifying and summarizing the presentation of statistics. But after looking over the results of our own and other commodity price spread studies, we raise a note of caution against the drawing of invalid conclusions from averages. Coupled with this we issue a further caution in regard to the length of periods used in trend analysis. Most of our studies run over periods of 9 to 10 years. In some instances this length of time may represent only part of a longer-term economic cycle in production, or it may cut into and out of one or more production cycles during the period at different phases of the cycle. We have endeavoured to interpret our analysis with these considerations in mind, both with respect to averages and to trends.

4. The Meaning and Significance of Commodity Price Spread Information

Price spread measurements *by themselves,* expressed in either absolute or relative terms, have little meaning. It is true that, having regard to the nature of the marketing process for a commodity, some judgments may be possible with respect to interpretation of the magnitude of the absolute margin and with respect to the proportion that the farm price represents of the price at retail. These judgments would be conditioned by the complexities in the marketing system for each commodity. One would expect a greater absolute marketing margin for those commodities requiring much handling and many transfers and for those requiring expensive processing and storage. It might follow also, but not necessarily, that the farm price as a proportion of the retail price would be lower for those commodities and products bearing a high marketing cost. But the foregoing principles

by no means apply consistently and there are many exceptions and variations. Therefore, useful and meaningful interpretation of price spread information, both with reference to the situation at any point of time and the changes in price spreads over time, must be based upon careful and detailed analysis of the measure of the spread and all available information pertaining to the farm production and marketing of the commodity from the farm to the consumer.

We have referred to the absolute price spread and the relative spread and we emphasize the importance of clearly distinguishing these two ways of expressing price spread measurements. The *absolute price spread* is the difference expressed in money between the price to the farmer for a unit of a food commodity and the price at retail for a unit of food product.[1] The *relative spread* represents an expression of the price to the farmer for a unit of product as a per cent of the price paid at retail by the consumer for a unit of product. In the discussion to follow we deal first with interpreting absolute price spreads and secondly with interpreting relative spreads.

It is important to remember that in the retail price the consumer is paying both for the food material of farm origin and for many other things unrelated to the farm. We can properly think of the demand for and the supply of the farm materials, and the demand for and the supply of the other things which become associated with the farm material. The important point is that the demand for and supply of the other things can change independently of the demand for and supply of farm materials. Once this point is grasped it is clear that there is no necessarily fixed spread associated with any farm product, and there is no necessarily fixed relation between the spread and the farm price. The spread, recognized as a price for marketing services, can and does move independently of the price for the farm material.

Let us consider a few simplified illustrations.

The consumer buying eggs pays for (1) eggs at the farm, (2) services between the farm and the market basket, including, (a) transportation from the farm to the store; (b) grading; (c) the carton in which the eggs are placed during marketing; (d) the service of the retailer, including the storage facilities he provides. When consumers' incomes rise they may not wish to buy any more eggs but they may be willing to pay more for more rapid transportation from the farm to the store, for a more convenient package to place in the refrigerator at home, and for improved facilities for storage so as to ensure greater freshness of the eggs. In this case there is no increase in the demand for eggs as they leave the farm. The increase in demand is for services provided between the farm and the home. The provision of more and preferred services consequent on the demand for them, or if a demand is created for them, will increase the price to the consumer without any change in the farm price. In this case the absolute spread increases.

When the consumer buys canned peas, she pays for (1) the peas as they leave the farm, and (2) services between the farm and the home, including, (a) the processing of the peas in the cannery; (b) the can in which the peas are placed; (c) grading; and (d) other services between the factory and the home. Suppose that a new technique in canning peas is developed which, with little investment, cuts in half the labour used in processing each can. Unless the reduction in

[1] Assuming appropriate adjustments for waste and by-products.

cost of processing is offset by increases in the prices of other things used in canning, or a price decline is inhibited by an absence of price competition in the industry, the price of the final product should fall but without any necessary change in the farm price. In this case the absolute spread would be reduced.

These two illustrations are sufficient to show that the price to the consumer may move independently of the price to the primary producer. That is to say, the absolute spread can increase or decrease because of changes which have little or no bearing on the farm price. What happens to the absolute spread may be of no consequence to the farm price.

In shifting from the absolute spread to the relative spread (with which we deal elsewhere in terms of the "farmer's share of the consumer's dollar") we must bear in mind that *any* change other than a proportionate change in farm and retail prices will result in a change in the relative spread. The relative spread will be altered by either a change in the farm price or in the retail price, or from concurrent but disproportionate changes in both prices. In the first illustration above, the retail price increased, the farm price remained the same, the absolute spread increased, and so did the relative spread, i.e., the farmer's share of the consumer's dollar declined. But as the price the farmer received remained unchanged, his position was neither worse nor better as a result of the decline in his share. In the second illustration the retail price decreased, the farm price remained the same, the absolute spread decreased, and so did the relative spread. Again this had no effect on the farmer's returns.

Suppose again that, in any year, there is an abnormally large crop of potatoes. If consumers will only buy more potatoes at a lower price, then the retail price will have to be reduced to dispose of the bumper crop. This decline in the price at retail, which is the result of supply conditions on the farms, and not in any way a consequence of conditions in the marketing system, is likely to be passed back to the farmer in a reduced price at the farm. If the retail price falls from \$1.00 to 75¢, and the farm price from 50¢ to 25¢, the absolute spread is unchanged but the farmer's share of the consumer's dollar has decreased. We could, of course, use the same figures, but assume an abnormally small crop with prices rising at the farm from 25¢ to 50¢, and at retail from 75¢ to \$1.00. Looking at it this way, the absolute spread has remained the same, but the farmer's share has increased.

We pointed out in Part II that, in food marketing services from farm to retail, there is a continuous shifting of functions back and forth. This shifting takes place, not only in what is commonly thought of as the marketing channel itself, but it also takes place at both ends of it—there being shifts to and from the farm and to and from the consumer. In general, the tendency has been to push the specialization process further and to shift functions into the marketing system where greater efficiency can be obtained. But not all changes have been in this direction. In some circumstances farmers have found a lucrative return from taking on functions generally found in the marketing system such as grading, storing, wholesaling and even retailing. The farmer who operates a roadside stand for fresh fruits and vegetables in effect establishes his own marketing system. Similarly, a housewife who buys a deep freeze cabinet, purchases sides of meat and fresh fruits or vegetables in quantity to pack and put away in the deep freeze

cabinet, has taken over marketing functions. These activities being carried on by the farmer or the consumer outside the marketing system contribute to increasing the farm share of the retail price.

To summarize: both absolute and relative price spread information must be interpreted in the light of all known facts surrounding the conditions of production, conditions in the marketing system and the conditions of demand. The relative spread, in making product-to-product comparisons, similarly must be interpreted against these facts.

One cannot assume that, because the farmer's share for product "A" is higher than for product "B", the farmer producing product "A" is better off. Similarly, in looking at changes in price spreads for a given commodity over shorter or longer periods of time, proper evaluation of the effects of the changes on the farmer's position must be carried out against a background of relevant economic information.

5. Sources of Data

Our commodity price spread studies, which we report upon in the remaining sections of this part, were based as far as possible on official published statistics. A detailed reference to the source of each and every figure used in these studies would occupy several pages. Because most of our basic statistical materials were taken from published reports, we considered that a general reference to sources would meet the requirements of most readers of this report and would avoid extensive footnotes.

While we drew most of our data from published reports, in many instances it was necessary to go back to source documents and working papers to rework original data for special purposes. In the main, our retail price statistics were obtained from the Dominion Bureau of Statistics which collects these primarily for use in compiling the food component of the Consumer Price Index. In general, these retail prices were taken from official compilation papers because they are not published or have not been published continuously in the detail necessary for price spread analysis. D.B.S. publications and records were also used as sources for certain price data at intermediate stages in the marketing system, for example at wholesale. Reports published by the Canada Department of Agriculture yielded certain specific price information, especially price quotations at terminal markets. These quotations were used for certain commodities where the price spread analysis could be carried through from raw material to end product for a definite grade and for a designated market.

For farm commodities there is a wide range in the manner and in the terms and conditions under which the material is sold by the farmer and transferred to the buyer. There are direct sales from farmer to consumer, sales through co-operatives, sales to itinerant buyers and truckers, sales by the farmer direct to terminal markets, sales of commodities in bulk, sales in containers, sales of ungraded and of graded commodities. The Dominion Bureau of Statistics collects farm prices for use in calculating "Index Numbers of Prices Received by Farmers" and in compiling estimates of cash receipts of farmers. For these purposes a so-called "weighted farm price" is required—that is a composite price which reflects the variety of terms and conditions of sale. Because of the composite nature, this

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series of commodity prices is of little direct use for marketing decisions, and it has not been published. However, we have used this source of information on prices for certain commodities for which the farm-retail price spread was calculated on a composite or overall basis.

Statistics required on the movement or flow of food commodities and products through the marketing system were likewise obtained from government publications. The Census of Industry, which is conducted on an annual basis by the Dominion Bureau of Statistics, provides data on quantities of products. In some instances this was a particularly valuable source of information on by-product yields. Canada Department of Agriculture monthly and annual market reports were the sources of statistics for seasonal and grade weightings. In an earlier section of this part we described conversion factors and the document in which these have been published.[1] In addition to using certain of these conversion rates, we obtained particular information where necessary by correspondence, and also in some instances derived special conversion factors from information given in questionnaire replies submitted to the Commission.

6. Summary of Findings of the Farm Commodity Studies

The producer and the consumer are especially interested in the price spreads on numerous individual products. This was demonstrated repeatedly at our public hearings. The Commission realized at the outset, however, that it would be able to study only the more important farm and fishery commodities. A selection was, therefore, made on the basis of importance to primary producers and to consumers in general across Canada or in particular localities. The list was chosen to include main or representative commodities falling in the major food commodity groups and also a few products of special interest to producers and consumers. Taken together the commodities selected account for the major part of the total incomes of farmers and fishermen and of the total outlay on food by consumers.

The commodity groups and individual commodities selected for study were: Livestock and Meats (beef and pork); Dairy Products (fluid milk, evaporated whole milk, process cheese and buttter); Poultry and Eggs (chicken broilers and A-large eggs); Cereals and Bakery Products (wheat-into-flour and wheat-into-bread); Vegetables (potatoes, tomatoes, canned peas, frozen peas, canned corn and fresh carrots); Fruit (fresh apples, canned and frozen strawberries and canned peaches); Certain Special Products (sugar beets, maple syrup, soups and baby foods); and Fishery Products (lobster, whitefish fillets, canned sockeye salmon, frozen halibut steaks, frozen cod fillets, fresh cod fillets, fresh haddock fillets).

We have been able to take a careful look at all of these commodities with the exception of carrots, soups and baby foods. Shortages of data or inherent statistical complexities prevented us from according these three products anything but a cursory examination. The fish commodities are discussed in Part VI of our report. In the present section of Part V, we summarize briefly the price spread findings which, along with an analysis of the factors affecting the spread, are

[1] *Canada Weights, Measures and Conversion Factors for Agricultural Products.*

presented for individual farm commodities in the next section.[1] In these two sections when we speak of "the spread" we are referring to the absolute spread; otherwise we speak of "the share of the retail value".

The 27 individual farm and fishery commodity presentations in our report are themselves summaries of fuller studies to be included in our Volume III, where more detailed explanations of statistical technique, as well as of interpretation, are provided.

We mention here two problems involved in the analysis and interpretation of price spreads of particular commodities. First, the figures we have used in our measurements represent in an aggregate way the results of the operations of many different processing and marketing firms. Each commodity price spread, therefore, represents a composite of costs which include, in addition to direct or operating costs, some share of indirect or overhead costs such as taxes, depreciation, executive salaries, and of the profits or losses of each firm. Almost all of the firms handle more than one commodity, and there is a problem of allocation of overhead costs among the commodities handled. In Part III we have examined the relation between total profits and the gross margins of firms. Second, the commodity price spreads we have measured and the changes we have noted represent the net effect of many influences some of which have tended to increase, and others to decrease, the spread. In the summary of our findings, contained in this section, we refer only to the dominant influences we have been able to detect, without attempting to measure their effects.

Our estimates of the farm-retail spread on 20 of our chosen farm food commodities are tabulated in Table 35 and expressed as index numbers in Table 36. The commodities are grouped, and the groups are presented in descending order of economic importance to the farmer. Maple syrup was excluded from the tables because retail prices were not available on a systematic basis. The estimates are for calendar years, except for potatoes, apples and sugar beets which are crop years beginning with the years shown. Because several of the individual studies in Section 7 do not include 1958, in order to facilitate comparison the period covered in the tables of this section is the nine years 1949 to 1957, except for frozen strawberries and frozen peas for which retail prices began in 1952, and broilers for which retail prices were calculated from 1953. The price spread estimates are for Canada as a whole except for sugar beets which are for the Prairie region only. The Commission is well aware that prices and price spreads usually vary from variety to variety as well as from commodity to commodity, from place to place, from day to day and sometimes even from hour to hour. But our prime responsibility was to discover the general year-to-year profile of price spreads over the last decade. We have also taken into consideration in Section 7 some of the regional or more local situations and problems drawn to our attention at the public hearings. A few calculations of more local price spreads will be presented in Volume III.

Tables 35 and 36 reveal a general tendency for farm-retail spreads to widen between 1949 and 1957. The only exception was butter. The spread on broilers, frozen peas and frozen strawberries narrowed over the more recent period for which estimates for these commodities could be made. Over the 1949 to 1957

[1] Some illustrative material on commodity marketing was presented in Part II, Chapter 1.

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Table 35—Summary of Farm-Retail Spreads for 20 Commodities, Canada, 1949 to 1957[a]

Commodities and Commodity Groups	Farm Unit Basis of Calculation	1949	1950	1951	1952	1953	1954	1955	1956	1957
A. *Livestock and Meats*										
1. Beef	¢/lb. live	8.0	9.0	12.3	14.1	12.5	10.8	10.6	11.6	13.1
2. Pork	¢/lb. carcass	14.3	14.5	15.9	16.1	18.6	19.7	16.3	17.1	18.3
B. *Dairy Products*										
3. Fluid Milk	$/100 lb.	2.85	2.98	3.30	3.55	3.53	3.57	3.61	3.66	3.94
4. Evaporated Whole Milk	$/100 lb.	3.75	3.74	3.91	4.37	4.16	4.18	4.05	3.85	4.02
5. Process Cheese	$/100 lb. milk	3.75	3.93	4.14	5.02	4.84	4.72	4.81	4.68	4.97
6. Butter	¢/lb. butterfat	18.7	17.4	17.3	19.0	18.1	17.5	18.0	17.7	18.4
C. *Poultry and Eggs*										
7. Chicken Broilers	¢/lb. live	n.a.[b]	n.a.	n.a.	n.a.	17.3	16.9	15.2	15.5	16.1
8. Eggs, A-Large	¢/doz.	11.1	12.1	13.7	14.4	15.3	14.6	14.9	15.2	16.4
D. *Cereals and Bakery Products*										
9. Wheat-flour	$/bu.	1.56	1.69	1.81	1.91	1.92	2.12	1.94	2.02	2.21
10. Wheat-bread	$/bu.	5.03	5.32	6.11	6.48	6.53	7.01	6.97	7.47	8.06
E. *Vegetables*										
11. Potatoes	$/100 lb.	1.71	1.46	1.77	2.01	1.65	2.07	2.20	2.16	2.46
12. Canned Tomatoes	$/ton	108.	94.	127.	158.	128.	111.	143.	149.	160.
13. Canned Peas	$/ton	327.	326.	346.	376.	389.	384.	380.	366.	378.
14. Frozen Peas	$/ton	n.a.	n.a.	n.a.	649.	635.	559.	509.	502.	471.
15. Canned Corn	$/ton	97.	91.	95.	99.	91.	87.	94.	92.	105.
F. *Fruit*										
16. Fresh Apples	$/bu.	2.38	2.77	3.15	3.58	3.89	4.21	3.82	3.90	4.20
17. Canned Strawberries	¢/qt.	39.6	40.7	39.1	47.3	43.3	47.6	45.5	43.1	45.8
18. Frozen Strawberries	¢/qt.	n.a.	n.a.	n.a.	60.7	59.4	55.6	51.3	49.8	47.4
19. Canned Peaches	¢/lb.	17.0	16.7	18.2	18.0	16.6	16.9	17.5	17.6	19.7
G. *Special Products*										
20. Sugar Beets[c]	$/ton	15.56	20.35	16.99	21.00	17.02	14.18	16.36	19.77	16.01

[a] Based on individual commodity price spread studies summarized in Part V Section 7. Calendar years except for potatoes, apples and sugar beets which are crop years beginning with years shown. Maple syrup excluded because retail prices not available.

[b] n.a. = Not available.

[c] Sugar beets are for Prairie region only.

Table 36—Indexes of Farm-Retail Spreads for 20 Commodities, Canada, 1949 to 1957[a]
(1949=100 except for Broilers (1953) and Frozen Strawberries and Frozen Peas (1952))

Commodities and Commodity Groups	Farm Unit Basis of Calculation	1949	1950	1951	1952	1953	1954	1955	1956	1957
A. *Livestock and Meats*										
1. Beef	¢/lb. live	100.0	112.5	153.8	176.2	156.2	135.0	132.5	145.0	163.8
2. Pork	¢/lb. carcass	100.0	101.4	111.2	112.6	130.1	137.8	114.0	119.6	128.0
B. *Dairy Products*										
3. Fluid Milk	$/100 lb.	100.0	104.6	115.8	124.6	123.8	125.3	126.7	128.4	138.2
4. Evaporated Whole Milk	$/100 lb.	100.0	99.7	104.3	116.5	110.9	111.5	108.0	102.7	107.2
5. Process Cheese	$/100 lb. milk	100.0	104.8	110.4	133.9	129.1	125.9	128.3	124.8	132.5
6. Butter	¢/lb. butterfat	100.0	93.0	92.5	101.6	96.8	93.6	96.2	94.6	98.4
C. *Poultry and Eggs*										
7. Chicken Broilers	¢/lb. live	n.a.[b]	n.a.	n.a.	n.a.	100.0	97.7	87.9	89.6	93.1
8. Eggs, A-Large	¢/doz.	100.0	109.0	123.4	129.7	137.8	131.5	134.2	136.9	147.7
D. *Cereals and Bakery Products*										
9. Wheat-flour	$/bu.	100.0	108.3	116.0	122.4	123.1	135.9	124.0	129.5	141.7
10. Wheat-bread	$/bu.	100.0	105.8	121.5	128.6	129.8	139.4	138.6	148.5	160.2
E. *Vegetables*										
11. Potatoes	$/100 lb.	100.0	85.4	103.5	117.5	96.5	121.0	128.6	126.3	143.9
12. Canned Tomatoes	$/ton	100.0	87.0	117.6	146.3	118.5	102.8	132.4	138.0	148.1
13. Canned Peas	$/ton	100.0	99.7	105.8	115.0	119.0	117.4	116.2	111.9	115.6
14. Frozen Peas	$/ton	n.a.	n.a.	n.a.	100.0	97.8	86.1	78.4	77.3	72.6
15. Canned Corn	$/ton	100.0	93.8	97.9	102.1	93.8	89.7	96.9	94.8	108.2
F. *Fruit*										
16. Fresh Apples	$/bu.	100.0	116.4	132.4	150.4	163.4	176.9	160.5	163.9	176.5
17. Canned Strawberries	¢/qt.	100.0	102.8	98.7	119.4	109.3	120.2	114.9	108.8	115.6
18. Frozen Strawberries	¢/qt.	n.a.	n.a.	n.a.	100.0	97.8	91.6	84.5	82.0	78.1
19. Canned Peaches	¢/lb.	100.0	98.2	107.1	105.9	97.6	99.4	102.9	103.5	115.9
G. *Special Products*										
20. Sugar Beets[c]	$/ton	100.0	130.8	109.2	135.0	109.4	91.1	105.1	127.0	102.9

[a] Based on individual commodity price spread studies summarized in Part V, Section 7. Calendar years except for potatoes, apples and sugar beets which are crop years beginning with years shown. Maple syrup excluded because retail prices not available.

[b] n.a. = Not available.

[c] Sugar beets are for Prairie region only.

period, the spreads increased fastest on apples (76.5%), beef (63.8%), wheat-into-bread (60.2%), canned tomatoes (47.8%), eggs (47.7%), wheat-into-flour (41.7%), fluid milk (38.2%), process cheese (32.5%) and pork (28.0%). The spreads tended to be at their widest either in 1952 or 1957, although the spreads were widest on a few commodities in 1951, and 1953 and 1954. Generally, the price spreads widened from 1949 to 1952 and narrowed thereafter for two to four years. Some spreads began widening again in 1956, and then there was a fairly pronounced and general widening in 1957.

Among the 10 commodities for which we were able to calculate the 1958 farm-retail spreads, only on broilers and eggs was the spread narrower than in 1957. The spread was the same for butter and flour in 1957 and 1958. For the remaining six commodities (beef, pork, fluid milk, evaporated whole milk, process cheese and bread) the spread continued to widen in 1958.

Table 37—Summary of Farm Share of Retail Price for 20 Commodities, Canada, 1949 to 1957[a]

(Per Cent)

Commodities and Commodity Groups	1949	1950	1951	1952	1953	1954	1955	1956	1957
A. *Livestock and Meats*									
1. Beef	68.5	70.6	69.3	60.7	56.9	59.4	60.4	57.5	53.9
2. Pork	65.9	64.7	65.6	60.0	59.3	58.9	57.9	57.3	59.7
B. *Dairy Products*									
3. Fluid Milk	57.5	56.7	55.3	55.3	55.5	55.0	54.5	54.1	53.5
4. Evaporated Whole Milk	41.8	41.1	44.1	38.7	37.9	37.6	38.4	40.2	41.1
5. Process Cheese	39.5	36.2	39.8	30.1	30.6	31.8	31.1	34.5	34.4
6. Butter	76.3	76.4	79.1	76.5	77.2	77.6	77.0	77.2	77.1
C. *Poultry and Eggs*									
7. Chicken Broilers	n.a.[b]	n.a.	n.a.	n.a.	62.7	58.8	63.6	59.7	57.5
8. Eggs, A-Large	81.5	78.0	80.0	74.9	76.8	73.1	75.4	74.7	70.0
D. *Cereals and Bakery Products*									
9. Wheat-flour	49.0	45.5	42.4	39.2	40.6	35.2	38.2	37.5	34.2
10. Wheat-bread	23.0	21.0	17.9	16.0	16.7	14.1	14.6	13.9	12.5
E. *Vegetables*									
11. Potatoes	47.2	47.1	67.5	57.8	43.1	54.9	45.0	47.2	41.6
12. Canned Tomatoes	20.0	21.3	18.5	18.2	22.1	23.3	19.3	18.6	18.3
13. Canned Peas	19.3	18.5	19.9	20.7	19.8	20.0	20.2	21.1	20.3
14. Frozen Peas	n.a.	n.a.	n.a.	13.1	13.1	14.7	16.1	16.1	16.6
15. Canned Corn	19.8	18.0	18.8	20.8	22.2	23.0	21.7	22.0	19.8
F. *Fruit*									
16. Fresh Apples	32.6	30.9	31.2	35.5	34.7	28.8	20.1	30.7	25.4
17. Canned Strawberries	32.8	34.3	37.9	30.5	30.1	30.5	33.6	35.5	32.9
18. Frozen Strawberries	n.a.	n.a.	n.a.	22.9	23.8	26.9	31.0	32.2	32.2
19. Canned Peaches	21.3	21.2	20.2	20.4	21.3	21.0	21.1	21.8	20.9
G. *Special Products*									
20. Sugar Beets[c]	45.7	45.5	47.1	42.1	44.1	46.7	46.3	47.0	44.8

[a] Based on individual commodity price spread studies summarized in Part V, Section 7. Calendar years except for potatoes, apples and sugar beets which are crop years beginning with years shown. Maple syrup excluded because retail prices not available.

[b] n.a. = Not available.

[c] Sugar beets are for Prairie region only.

The farmer's shares, expressed as a per cent of the retail equivalent values of the 20 commodities, are tabulated in Table 37, and expressed as index numbers in Table 38. These tables reveal that there was a general tendency for the farm share to decline between 1949 and 1957. The only exceptions were canned peas, butter, canned strawberries and canned corn. Over a more recent period, however, the farm shares increased on frozen peas and frozen strawberries. Over the period as a whole, the declines in farm shares were slight on evaporated whole milk, canned peaches and sugar beets. Farm shares decreased the fastest on wheat-into-bread (45.7%), wheat-into-flour (30.2%), apples (31.9%), beef (21.3%), eggs (14.1%) and process cheese (12.9%).

Among the 10 commodities for which we were able to calculate the farmer's share of the retail equivalent value in 1958, the share increased over 1957 for six commodities (beef, butter, broilers, eggs, flour and bread), and continued to decrease for the remaining four commodities (pork, fluid milk, evaporated whole milk and process cheese).

Table 38—Indexes of Farm Share of Retail Price for 20 Commodities, Canada, 1949 to 1957[a]

(1949 = 100 except for Broilers (1953) and Frozen Strawberries and Frozen Peas (1952))

Commodities and Commodity Groups	1949	1950	1951	1952	1953	1954	1955	1956	1957
A. *Livestock and Meats*									
1. Beef	100.0	102.9	101.2	88.6	83.1	86.7	88.2	83.9	78.7
2. Pork	100.0	98.2	99.5	91.0	90.0	89.4	87.9	86.9	90.6
B. *Dairy Products*									
3. Fluid Milk	100.0	98.6	96.2	96.2	96.5	95.6	94.8	94.1	93.0
4. Evaporated Whole Milk	100.0	98.3	105.5	92.6	90.7	89.9	91.9	96.2	98.3
5. Process Cheese	100.0	91.6	100.8	76.2	77.5	80.5	78.7	87.3	87.1
6. Butter	100.0	100.1	103.7	100.3	101.2	101.7	100.9	101.2	101.0
C. *Poultry and Eggs*									
7. Chicken Broilers	n.a.[b]	n.a.	n.a.	n.a.	100.0	93.8	101.4	95.2	91.7
8. Eggs, A-Large	100.0	95.7	98.2	91.9	94.2	89.7	92.5	91.6	85.9
D. *Cereals and Bakery Products*									
9. Wheat-flour	100.0	92.8	86.5	80.0	82.8	71.8	78.0	76.5	69.8
10. Wheat-bread	100.0	91.3	77.8	69.6	72.6	61.3	63.5	60.4	54.3
E. *Vegetables*									
11. Potatoes	100.0	99.8	143.0	122.4	91.3	116.3	95.3	100.0	88.1
12. Canned Tomatoes	100.0	106.5	92.5	91.0	110.5	116.5	96.5	93.0	91.5
13. Canned Peas	100.0	96.4	103.1	107.3	102.6	103.6	104.7	109.3	105.2
14. Frozen Peas	n.a.	n.a.	n.a.	100.0	100.0	112.2	122.9	122.9	126.7
15. Canned Corn	100.0	90.9	94.9	105.0	112.1	116.2	109.6	111.1	100.0
F. *Fruit*									
16. Fresh Apples	100.0	94.8	95.7	108.9	106.4	88.3	61.6	94.2	77.9
17. Canned Strawberries	100.0	104.6	115.5	93.0	91.8	93.0	102.4	108.2	100.3
18. Frozen Strawberries	n.a.	n.a.	n.a.	100.0	103.9	117.5	135.4	140.6	140.6
19. Canned Peaches	100.0	99.5	94.8	95.8	100.0	98.6	99.1	102.3	98.1
G. *Special Products*									
20. Sugar Beets[c]	100.0	99.6	103.1	92.1	96.5	102.2	101.3	102.8	98.0

[a] Based on individual commodity price spread studies summarized in Part V, Section 7. Calendar years except for potatoes, apples and sugar beets which are crop years beginning with years shown. Maple syrup excluded because retail prices not available.

[b] n.a. = Not available.

[c] Sugar beets are for Prairie region only.

It is interesting, but hazardous, to compare the general *levels* of farm shares for the different commodities, as distinct from changes in farm shares over the period. There is a danger of drawing unwarranted conclusions from such comparisons. The relative level of a farm share gives no indication of the relative profitability of commodities to the farmer or to the middleman. The general level of farm shares usually indicates the extent of marketing services (such as storage, processing, packaging and transportation) attached to the commodity after it leaves the farmer's hands.

Having repeated our warning to the reader, we can now draw attention to the fact that only on butter and eggs has the farm share normally exceeded 70% of the retail equivalent value. Fresh eggs require no processing, and butter processing and packaging are simple operations. At the other extreme, only on bread and frozen peas has the farm share normally been less than 20%, although it was around 20% on canned tomatoes, canned peas, canned corn and canned peaches—all of which are commodities that undergo extensive and expensive processing.

The farm share levels on frozen strawberries, apples, canned strawberries and process cheese were about 28%, 30%, 33% and 34% respectively. The farm shares on evaporated whole milk, flour and sugar beets were about 40%, 40% and 46%. The farm shares on chicken broilers, pork and beef averaged about 60%, 61% and 62% respectively.

In general, the widening of the spreads between 1949 and 1957 was the result of an increase in food marketing services and in the prices of those services during the period. We have discussed this earlier in the report. The particularly wide spreads in 1952 resulted from the fall in prices, especially farm prices, in 1952, after a period of rising prices, especially farm prices.

In comparing changes in the price spreads for various commodities over the last decade, allowance has to be made for abnormal market situations which may have existed for some commodities, particularly in the terminal years 1949 and 1957.

The price spread increased fastest on apples during our period of study. Several influences were at work—longer and more expensive storage (both cold and controlled-atmosphere storage); higher packing-house costs, due to increased wages and a multiplicity of containers, several of which are increasingly elaborate; increased freight rates; and more advertising and promotion. Wholesale and retail margins increased.

The fact that the spread on beef increased so fast between 1949 and 1957 is not especially significant, because these two years are not really comparable in this case. Cattle and beef are subject to cyclical variation in production and prices, and 1949 and 1957 were not at comparable stages of these cycles. The year 1949 was on the upswing phase of the price cycle, while 1957 was at the bottom of the cycle. To obtain a year comparable to 1949, we would have to wait until about 1961, by which time the beef price spread will likely have narrowed again compared with 1957. In saying that these long cyclical swings are the major influence on beef spreads, we do not deny that there have also been additional services attached to this product which could explain some of the widening of the spread between

1949 and 1957. We are thinking of additional services such as cutting smaller pieces, pre-trimming and packaging, and of rising costs of materials, labour, transportation, etc.

Pork is subject to shorter cyclical variations in production and prices than beef, but the main factor causing a widening of the pork price spread over the last decade seems to have been the increased amount of processing and packaging, particularly for the smoked or cooked pork products.

Among major dairy products, the farm-retail spread increased fastest for fluid milk. Increased processing and delivery costs, particularly payrolls and containers, appear to have been the main reasons for the widening spread. The widening in the farm-retail spread for evaporated whole milk was moderate, and took place largely at the retail level. The widening spread for cheese was due mainly to the addition of more processing services, such as cutting into smaller sizes or slices, and to more packaging and advertising. Although the farm-retail spread on butter actually narrowed a little between 1949 and 1957, the retail component widened. Butter processing and packaging have continued to be simple operations. The Federal Government has absorbed some of the butter marketing costs through its price support operations. The keen competition of margarine retarded rising retail prices of butter. A small markup on butter seems to be traditional.

Broilers are one of the few farm food products which showed a well-pronounced downward trend in both retail and farm prices. Also (more remarkably) the farm-retail spread narrowed. This was a result of spectacular technological and commercial developments and expansion in the broiler industry during our period of study. In contrast, the price spread on eggs widened substantially during the last decade. This was due mainly to increasing costs of grading and wholesaling.

Although wheat prices declined over the decade, flour and bread prices increased. The price spread on wheat-into-flour widened substantially during the decade, but not nearly as fast as the spread on wheat-into-bread. In other words, baking costs rose faster than milling costs. Part of the widening of the miller's spread can be explained by the increased amount of consumer-size packaging performed. The combined wholesale-retail markup on flour increased substantially. With bread prices rising and wheat prices falling during the period, the wheat farmer's share of the price of bread in 1957 was not much more than half of what it was in 1949. The farm-retail spread on bread increased by 60% over the nine years. The increase took place partly in the retail margin, but mainly in the bakery-wholesale margin. The main reasons were higher labour, packaging, promotional and delivery expenses.

The farm-retail spread on potatoes widened during the last decade, because of higher labour costs of packaging, rising transportation costs, and constant per cent markups at wholesale and retail on a rising farm price. The spread on canned tomatoes widened mainly because of increased processing costs. In addition, canned tomatoes were imported from the United States in increasing quantities over the decade, and the spread was widest in the years of heavy imports. The moderate increase in the spread on canned peas can be attributed to increased

wholesaling and retailing charges. No definite upward or downward trend in the spread on canned corn was apparent during our period. The supply and demand for canned peas and corn were in more stable adjustment than for canned tomatoes.

The spread on frozen peas, in contrast with canned peas, narrowed conspicuously. The same was true for frozen strawberries, in contrast with canned strawberries for which the spread increased moderately over the decade. The supply of frozen vegetables and fruit has been increasing rapidly. Increased freezer space in retail outlets and keen competition from other frozen foods exerted a downward pressure on prices. Handling and freezing operations became more mechanized, thereby lowering production costs. The increase in the spread on canned strawberries took place almost entirely in the combined wholesale-retail margin.

The spread on canned peaches, as with canned corn, did not exhibit any definite trend towards widening or narrowing. The same holds for sugar beets processed into sugar in the Prairie region.

7. The Individual Farm Commodities

BEEF[1]

Beef is certainly one of the most important farm products in Canada and its relative importance is increasing. Over the period 1945 to 1957 cash farm income from cattle and calves amounted to about 30.0% of cash income from all livestock and livestock products in Canada, compared with about 22.9% over the comparable period 1934 to 1945. Cattle and calves account for a substantial and increasing proportion of all cash income from farm products—during the period 1945 to 1957, the proportion was 16.8% compared with 12.8% during the periods 1934 to 1945. Expenditures of Canadians on beef amounted to about 40% of their expenditures on all meat and poultry products and accounted for about 11% of their total expenditures on food. Over the last 25 years, the trend in per capita consumption of beef has been upward, from 62.5 pounds annually during the 1934 to 1945 period to 67.1 pounds during the 1945 to 1957 period.

Excepting some farm-killed beef, the cattle leave the farm, ranch or feedlot alive, and usually by truck. They may continue by truck or rail to a country auction, public stockyards, packing plant, or to the United States or overseas. Besides the cost of transporting the cattle to market, there are also the in-transit costs of shrinkage and bruising to be borne by the farmer.

In a general way, the pattern of prices for beef cattle is established at the 11 public stockyards. There has been a decline in recent years, however, in the proportion of cattle sold through public stockyards, and a rapid increase in auction sales at country points. Live cattle are not graded officially; the estimated yield

[1] The main references in the public hearings to this subject were: Vancouver, *Proceedings*, Vol. 1, pp. 46-7, 63-4a, 97-9, 156-7; Edmonton, Vol. 4, pp. 533-6, 554-6, 566-9, 665-6, 678-85, 695-6, 705-20; Winnipeg, Vol. 6, pp. 764-74, 786-89, 848-53; Regina, Vol. 9, pp. 1407-14, 1425-33; Fredericton, Vol. 10A, pp. 1752-9, 1814-5, 1819; Toronto, Vol. 15, pp. 2377-81, 2393-4, Vol. 16, pp. 2599-602, 2659-61, 2690-2, 2778-811; Ottawa, Vol. 23, pp. 3661-4, 3724-30, Vol. 24, pp. 3835-72, Vol. 25, pp. 3934-6, Vol. 26, pp. 4057-64, Vol. 27, pp. 4223-4, 4245-6, 4294-7, and Vol. 29, pp. 4719-21, 4757-75, 4784-8.

and official carcass grade are the main factors in establishing the price of an animal. Beef cattle, excluding feeders, are usually slaughtered within a few days of leaving the farm. The bulk of the beef sold in fresh form over the retail counter comes from the top four carcass grades—Choice, Good, Standard and Commercial Classes 1 and 2. There has been a shift over the last decade towards a higher proportion of cattle marketed as steers on public stockyards and towards a higher proportion of Choice (Red Brand) and Good (Blue Brand) carcasses.

Beef, like other fresh meat, is a perishable product unless chilled, frozen or processed. It requires careful handling, and is subject to shrinkage and discoloration as well as to deterioration. These characteristics call for either rapid turnover of fresh beef or regulated refrigeration and careful packaging. Beef is a heavy product and requires a lot of man-handling.

Cattle numbers on farms and beef production and prices are characterized by a cyclical pattern of behaviour with an average duration of about 12 years. When cattle marketings are in the upward phase of the cycle, prices are in their downward phase and vice versa. The Commission's decade of study 1949 to 1958 does not comprise a full cattle cycle and, therefore, comparisons and conclusions over this period must be made with great caution. The year 1957 marked the turning point from the upward phase of the last cattle population cycle to the downward phase of the next cycle. The two preceding peaks in numbers were in 1945 and 1934.

There is another influence on beef prices and consumption which must be mentioned here—the substitutability of beef and pork in the consumer's food budget. When pork prices are low relative to beef prices, consumers tend to eat more pork and less beef, and when pork prices are high relative to beef, consumers tend to eat more beef and less pork. Since pork production and prices are also subject to cycles, this matter of substitutability of beef and pork is important.

There has been a definite upward trend in the number of cattle slaughtered domestically. Exports and imports of fresh beef have also increased prominently. The net effect has been to increase the domestic consumption of beef, not only to supply the growing population, but also per capita.

Ontario and Alberta are the largest producing provinces of beef cattle, followed by Saskatchewan, Quebec and Manitoba. The relative importance of beef cattle production in Alberta, Saskatchewan and Ontario has increased, but it has declined relatively in Quebec, Manitoba, British Columbia and the Atlantic Provinces. Southern Alberta has become prominent as a cattle feeding (finishing) area in recent years. In spite of the large production of beef in Ontario and Quebec, these central provinces are deficit regions because of their dense populations. The Prairie Provinces are a surplus region, and so many slaughter and feeder cattle move from there to markets in central and eastern Canada and in the United States. About half of the beef held in cold storage in Canada over the last cattle cycle was in storage plants in Ontario and Quebec, and the relative importance of beef storage in these central provinces has increased.

About 62% of Canada's 154 slaughtering and meat packing establishments are located in Ontario and Quebec. There are many fewer meat packing firms than there are establishments, however. In 1957, the big three (Canada Packers, Swift's and Burns) accounted for about 70% of total cattle slaughterings.

Over the last 25 years, there has been a long-run upward drift in cattle prices, probably mainly because of general inflation and an increasing demand for beef. Regional comparisons reveal that beef cattle prices in the deficit area, Ontario and Quebec, have been generally higher than in the surplus Prairie area.

Beef cattle marketings have a distinct seasonal pattern which results in an inverse seasonal pattern of prices. Heaviest marketings are in the autumn, particularly November, and this is the season when cattle prices are lowest. Marketings fall off thereafter, reaching a minimum during the three-month period April-June, and this is the season when cattle prices are highest. Wholesale and retail prices for beef follow a different seasonal pattern from beef cattle prices. Wholesale and retail beef prices are highest in summer and lowest during winter, whereas cattle prices are highest during spring and lowest in the autumn.

Study of the behaviour of the retail prices of fresh beef over the last decade shows clearly how these prices reached a cyclical peak in 1951. Prices fell after 1951 until 1954, but then resumed their upward drift until 1957 when they began another cyclical upswing. The prices for live cattle also rose rapidly up to 1951, and then underwent a sharper decline than retail beef prices.

Mention was made at the Commission's hearings of a difference in the price behaviour of higher-priced and lower-priced cuts of beef. When beef prices are rising rapidly in a cyclical upswing the prices of the less-expensive cuts tend to rise fastest. In other words, the price differential between the more and less expensive cuts narrows during an upswing in beef prices. This means that during the upswing phase of our period, i.e., 1949 to 1951, the farmer's share of the retail beef price increased fastest for the more-expensive cuts, and subsequently up to 1957 the farmer's share decreased fastest for these more-expensive cuts.

The results of our calculations of the farm-retail spreads for fresh beef for each of the last 10 years are summarized in Table 39 and shown in Chart 17. The basis of calculation is a pound of live sale by the farmer. Retail prices are available for our decade of study for six retail cuts of beef only. We made a careful scrutiny of available information on beef cut-out tests at retail in order to derive appropriate annual weights for prices of the six cuts in arriving at a composite yearly retail price. The cut-out tests called for declining weights for the higher-priced cuts and increasing weights for the lower-priced cuts during the decade. The significance of this matter can be appreciated when one realizes that prices for the different cuts may vary from over one dollar per pound for prime cuts, at one extreme, to one-hundredth of a cent per pound for waste fat and bones, at the other extreme.

The basis for our farm price was the stockyard price of Good steers. In order to arrive at a farm-gate price, stockyard and transportation charges were subtracted and an allowance for by-products was made. We examined the available data on live-to-cold dressed yield, and found that this evidently increased somewhat over the period of study, both in Canada and the United States. This was due mainly to a higher proportion of beef-type cattle slaughtered. On the other hand, the proportion of waste trimmed out at retail apparently increased during the decade. After careful study, both of these factors were taken into account on an annual basis in calculating the farm-retail spread. The net effect of the two factors upon the farm-retail spread and the farmer's share of the retail

price was small because the effects of the two factors tend to be offsetting. The combined live-to-retail yield averaged 46% over the decade. In other words, the retail price per pound of beef had to average more than double the live weight price per pound in order to cover the payment to the farmer—before taking any marketing expenses into account. A fuller explanation of the rather complex statistical procedure involved in these several calculations will be given in the beef price spread study in our Volume III.

Table 39—Summary of Farm-Retail Spreads on Beef, Canada, 1949 to 1958[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 lb. Live	Farm Price	By-Product Value	Farm Price Less By-Products	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/lb.)	(¢)	(¢/lb.)	(¢/lb. live)	(¢/lb.)	(¢/lb. live)	%
1949	56.9	25.4	19.8	2.4	17.4	8.0	68.5
1950	67.8	30.6	24.6	3.0	21.6	9.0	70.6
1951	85.4	40.1	31.8	4.0	27.8	12.3	69.3
1952	76.5	35.9	23.9	2.1	21.8	14.1	60.7
1953	62.1	29.0	18.4	1.9	16.5	12.5	56.9
1954	58.2	26.6	17.7	1.9	15.8	10.8	59.4
1955	58.9	26.8	18.1	1.9	16.2	10.6	60.4
1956	59.2	27.3	17.5	1.8	15.7	11.6	57.5
1957	61.2	28.4	17.2	1.9	15.3	13.1	53.9
1958	70.2	32.4	21.2	2.1	19.1	13.3	59.0

[a] Adapted from price spread study of beef in Volume III where an explanation of procedure such as the use of annually variable live-to-dressed and dressed-to-retail yields is given.

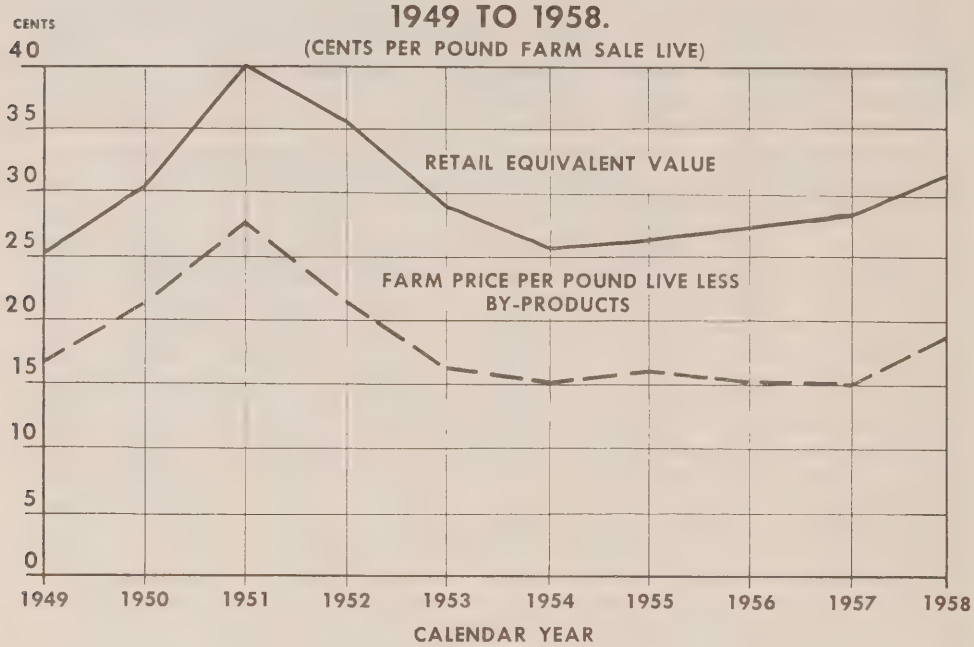
Table 39 and Chart 17 show how retail and farm prices for beef rose rapidly from 1949 to an extreme peak in 1951 and then fell rapidly to 1953, tapered off for about three years thereafter, and then in 1957 began climbing again for another cyclical upswing. The farm-retail spread on beef widened rapidly from a minimum in 1949 to a maximum in 1952, and then fell to 1955, after which it began widening again. The increase in the spread between 1957 and 1958 was slight, however.

The farmer's share of the retail price for beef rose from 68.5% in 1949 to 70.6% and 69.3% in 1950 and 1951, and fell sharply to 56.9% in 1953. The farmer's share then partially recovered in 1954 and 1955, but receded again to a minimum of 53.9% in 1957. The farmer's share recovered to 59.0% in 1958.

The major factor in the widening price spread on beef seems to have been statistical. The terminal years of our period of study, 1949 and 1957, were not at comparable stages of the cattle price cycle. The year 1949 was on the upswing phase, and 1957 was at the bottom, of the price cycle. To obtain a year comparable to 1949, we would have to wait until about 1961, by which time the price spread will likely have narrowed compared with 1957. The balance of the explanation for the widening spread seems to be both in additional services and in increased costs of marketing livestock, of processing and of retailing beef. There have undoubtedly been improvements in efficiency in meat distribution and processing during the last decade, but these have not been sufficient to offset the rising costs of materials, labour, transport etc. and of additional services such as cutting

CHART 17

PATTERN OF FARM-RETAIL VALUES FOR BEEF, CANADA, 1949 TO 1958.



smaller pieces, pre-trimming and pre-packaging. Although the meat packer's margin increased, its influence on the farm-retail spread appears to have been secondary to that of the increased retail margin.

Naturally, with such an important product as beef, the Commission received numerous representations concerning beef marketing. We were told in Vancouver by the British Columbia Federation of Agriculture that the grading of products such as beef can be overdone. In Vancouver, the grading of beef is carried right through to the retail shelf. We were informed that the effect there has been to prejudice the sale of lower-grade, but quite nutritious and tasty, beef produced from grass-fed rather than grain-finished cattle. If it is true, as contended, that the typical consumer really does not care for fat beef, then the fault may lie with the existing grading standards for emphasizing this feature of finish so much, rather than with the carrying of grading as such through to the retail level. In Edmonton, we were told that the farmer feels that he will not be fully compensated for producing quality livestock until the grades by which the packer buys the primary product are carried through to the retail meat counter. At our Ottawa hearings, the Canadian Association of Consumers suggested that for the protection of consumers meat which has not been inspected should be so marked at the point of retail sale.

We were informed in Edmonton and Regina that retail meat prices do not fluctuate to the same degree as do livestock prices. We have already drawn

attention to how cattle prices underwent a sharper decline than retail beef prices after 1951. This is why the farm-retail spread reached its widest point in 1952, at the beginning of the declining phase of the beef price cycle. We have also pointed out that wholesale and retail prices for beef follow a different seasonal pattern than beef cattle prices. Wholesale and retail prices are highest in summer and lowest during winter, whereas cattle prices are highest during spring and lowest in the autumn. The result is that the farm-wholesale and farm-retail price spreads are usually widest in summer and narrowest during winter and spring. The explanation of these seasonal time lags seems to be mainly the lapse of a few weeks between live and retail sale, but seasonal variations in the demand for fresh beef and for beef by-products, and inertia in pricing at wholesale and retail, may also be involved.

We were told in Edmonton, Winnipeg and Regina that farmers are suspicious when heifers sell at comparable prices with steers only when slaughter cattle are scarce and otherwise at a three to five cent discount. Producers were said to believe that yearling heifers yield carcasses "nearly" comparable to yearling steers. We understand that typically the live-to-dressed yield and the proportion of higher-priced cuts is higher with steers than heifers, but this is by no means invariably so. Apparently it is more likely with heavier carcasses. If this is true, however, then the fact that the heifer-steer price differential varies with the supply-demand situation should not be considered peculiar. Supermarkets generally prefer steer beef, and have become increasingly influential customers. Only when beef is scarce can supermarkets not afford to be discriminating customers. It was pointed out in a Federal Department of Agriculture document submitted to us in Regina that the price premium on steers over heifers varies seasonally in relation to the volume being marketed—the months when heifers are in largest supply are also the months of the greatest spread in prices. This is what we would expect to happen in a free market, if the buyers prefer steer beef. We drew attention earlier to another illustration of this phenomenon. The retail price differential between the more and less expensive cuts of beef narrows during a temporary period of scarcity. The Canadian Federation of Agriculture has suggested to us that there may be a long-run trend in the opposite direction as incomes and living standards rise and people switch to buying better cuts.

The Commission recognizes the importance of the matter of cut-outs. It is not impossible, for example, that the preference of the trade for steer over heifer beef is based on an inaccurate understanding of the relative yield of steer and heifer carcasses, physically and financially. We feel strongly that from time to time cut-out tests should be made across Canada under valid sampling procedures (and the results published) so that the industry and other interested parties may keep in touch with cut-out changes (whether the changes be long-run, cyclical, regional or in heifer-steer differentials). We also suggest that live as well as dressed weights of slaughter cattle be published systematically to keep track of trends in the live-to-dressed yields. We feel, moreover, that at least monthly prices of all major animal by-products should be collected and published.

In Fredericton, we were told that farm-retail spreads on beef were unjustifiably large in the Maritimes. The Maritime region as a whole is a deficit region in beef, and yet farm prices tend to be lower, and retail prices higher, than in Quebec or

Ontario. (We would like to point out parenthetically here that Quebec and Ontario are also deficit regions in beef.) The only explanation we could obtain of why beef cattle prices are lower in the Maritimes, grade for grade, than in Ontario and Quebec, is that the Maritime cattle arrive at the packinghouse with greater fill and hence more weight is lost in slaughtering. We were unable to confirm this, but even if accepted and allowed for, we cannot understand how cattle prices in the Maritimes could consistently fall below Montreal prices, grade for grade, by more than the costs of shipping cattle from the Maritimes to the Montreal and Toronto markets. We can see how Maritime prices would tend to be lower than Montreal or Toronto by anything up to the amount of shipping costs. On the other hand, we can see why retail beef prices in a deficit region like the Maritimes would tend to be high enough to make it pay to bring in cattle from Montreal and Toronto to cover the deficiency. These higher retail prices would be reflected in the D.B.S. retail price quotations which are urban in origin. The result of the lower farm prices and the higher retail prices, of course, is a wide farm-retail spread.

If the discount on Maritime cattle has often exceeded their cost of shipment to Montreal and Toronto, we wonder whether in fact the same quality of cattle were being compared. Generally speaking, beef production in the Maritimes is a by-product of the dairy industry. Are the unofficial live grades sensitive enough to sort out the qualities which higher-income people prefer in steer beef over cow and heifer beef? Otherwise, Maritime shippers are inexplicably foregoing a profitable trade in shipping beef more regularly to the Montreal and Toronto markets. We wish to commend the Maritime Co-operative Services for their enterprise in shipping cattle to Montreal when they find that the price differential is in excess of shipping costs.

PORK[1]

Over the decade of study, cash farm income from the sale of hogs amounted to 12.0% of total cash income from farm products and 21.2% of cash farm income from all livestock and livestock products. Consumer expenditures on pork amounted to about 8.1% of total food expenditure. The annual per capita consumption of pork averaged 51.3 pounds.

Hogs are usually shipped live from the farm directly to packing plants or public stockyards or, as feeder hogs, to community auctions. Over the period of study, about 87% of the hogs were delivered directly to packing plants. Shipping costs are met by the farmer, as are selling fees, transit insurance and shrinkage.

Over the decade of study, about 80% of the hogs slaughtered were in federally-inspected or "approved" plants. In the inspected plants, and in some of the approved plants, the hogs must meet federal, provincial or municipal health requirements. At federally-inspected plants, and optionally at approved plants, the hog carcasses are graded by federal graders. The government does not charge for its inspection and grading services.

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[1] The main references in our public hearings on this subject were: Vancouver, *Proceedings*, Vol. 1, pp. 47-8, 99-100; Winnipeg, Vol. 6, pp. 759-60; Fredericton, Vol. 10, pp. 1726-31; Toronto, Vol. 15, pp. 2426-8 and Vol. 17, pp. 2793-8; Montreal, Vol. 21B, pp. 3440-532; Ottawa, Vol. 24, pp. 3844, 3847, 3852, 3866-9 and Vol. 26, pp. 4064-74, 4082-4, and Vol. 27, p. 4226.

There are 14 official grades for hog carcasses, and the hog carcasses are bought by grade on a weight basis. There are fairly standard and stable price differentials between the top five grades. The federal government pays a premium to producers of $2.00 per Grade A hog and $1.00 per Grade B1. Over the last decade as a whole about 71% of all hogs were grade A and B1, but there was a definite decline during the first four years in the proportion of hogs graded A and B1.

During the last decade, 81.5% of the hogs were marketed in three provinces, Ontario, Alberta and Quebec. Manitoba and Saskatchewan marketed another 15.0%. With 18% of Canada's population, the Prairie region produced 40% of the hogs. Surplus live hogs and pork from the Prairies are shipped eastwards and westwards to deficit areas in central and eastern Canada and British Columbia.

Storage is a very important stabilizing function in pork marketing, because of the considerable seasonal variation in hog production. Storage stocks are built up over the winter months and drawn down during the summer. A storage program also helps to meet certain periods of peak demand, notably Christmas-New Years and Easter. The largest storage stocks are held in the provinces of largest hog production, Ontario, Quebec and Alberta.

During 1952 the United States placed an embargo on imports of Canadian hogs and pork due to an outbreak in Saskatchewan of foot-and-mouth disease. Hog prices dropped to the price support level of $26.00 per 100 pounds, and the Agricultural Prices Support Board had to make heavy purchases to prevent prices dropping further. A large quantity of pork was preserved by canning.

From 1953 to 1958, at a support level of $23.00, no purchases by the Board were required. In 1958, the support was raised to $25.00. In October, 1958, the Board again began support operations and became heavily committed in both fresh and canned pork. In October, 1959, the support level is to drop to $23.65.

Historically, hog production and prices have been subject to cyclical variations averaging three to four years in duration. Over the decade of study, there appears to have been two and a half production cycles, beginning from a low supply phase in 1949 and ending with a high supply phase in late 1958 and in 1959. During the periods of high production prices were low, and during the periods of low production prices were high.

There is a normal seasonal pattern of variation in pork production and prices. Farrowing of pigs are concentrated in the spring and fall. Over the decade of study, the season of peak production was the late autumn and the peak month was December. There were particularly heavy marketings in December of the price-support years 1952 and 1958. A secondary peak normally occurred in March. Seasonally, prices tended to vary inversely with the seasonal pattern of production, but the price variations were less marked.

The main export market for pork during the decade of study was the United States. These exports varied from 3.5% of production in 1952 to 14.8% in 1950. Generally, exports to the United States were high in years when Canadian production was high. Total exports were greatest during the two years 1949 and 1950 when substantial exports on contract were also made to the United Kingdom. Except in 1951, pork imports over the last decade amounted to less than 1% of domestic production.

During the decade, the per capita consumption of pork increased during periods of heavy supply and low prices and decreased in years of low supply and high prices. A slight upward trend was discernible over the decade as a whole, however.

Bacon is an important pork product and accounts for about 15% of the hog carcass. Consumer expenditures on bacon over the last decade amounted to about 24% of expenditures on all pork products. The proportion of bacon sold sliced increased during the decade. Over the period 1954 to 1957 approximately 50% of the bacon was sold sliced.

Stocks of frozen bellies which are normally built up during the late autumn and winter months are withdrawn from storage between June and October for processing into bacon. There is a time lag in the movement of retail and wholesale bacon prices behind the movement of hog carcass prices which probably is due to the lapse of time between buying the carcass and selling the bacon caused by storage and processing. With reference to the hog price cycle, wholesale bacon prices swing rapidly upwards and downwards, but retail prices tend to swing more rapidly upwards than downwards. The result is a narrowing of the retail bacon margin on the upswing phase of the price cycle and a widening on the downswing phase.

Our calculations of the farm (stockyard)-retail spreads on B1 hog carcasses are summarized in Table 40 and shown in Chart 18. The basis of calculation is one pound of carcass pork. The farmer is paid on a carcass-graded basis, and we were unable to derive an authentic farm-level value, mainly because of lack of data on live weights and live marketing charges. The farmer's share shown in the table, therefore, is inclusive of primary marketing costs of live hogs, such as transportation, which are often performed for the farmer for a cash payment. Also due to insufficient data, a constant allowance had to be assumed for waste throughout the period of study. The retail price is a composite of five major pork cuts, two of which are retailed fresh and three processed. Further details as to procedure of computation are provided in Volume III.

Retail and stockyard prices fluctuated considerably during the decade. These prices tended to move together from year to year, but the retail price showed greater fluctuations. The stockyard price trended downward. The price spread increased from 1949 to 1954, decreased in 1955, and then increased from 1956 to 1958. In 1958 the spread almost attained its maximum of 19.7¢ reached in 1954. Over the decade as a whole there was a definite widening of the spread.

The farmer's share (stockyard basis) of the retail equivalent value averaged 60% over the decade. From 1949 to 1951, the farmer's share remained fairly stable at 65% to 66%, but from 1952 to 1956 it decreased to 57.3%. In 1957 the farmer's share increased to 59.7%, but in 1958 it dropped again to 56.5%. Over the period as a whole, the farmer's share definitely decreased.

The widening spread and the declining farm share seem to have been due mainly to a substantial increase over the decade in the amount of processing and packaging. We are referring particularly to smoked pork products, such as hams and bacon, which used to be sold in whole cuts but which now usually sell defatted, skinless, boneless, in small cuts or slices, and conveniently packaged in

CHART 18

PATTERN OF FARM-RETAIL VALUES FOR PORK, CANADA, 1949 TO 1958.

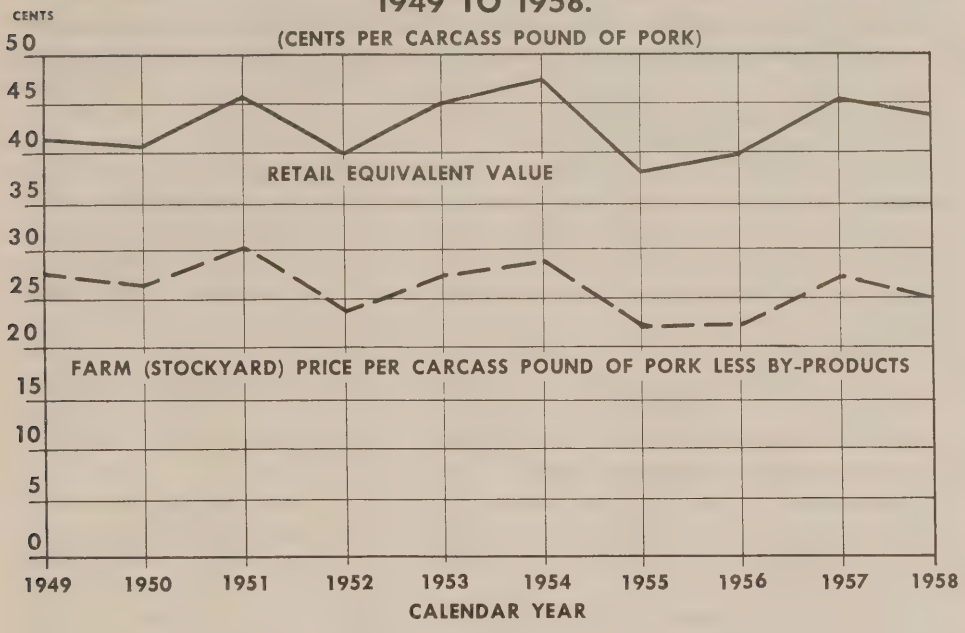

Table 40—Summary of Farm (Stockyard)–Retail Spreads on Pork, Canada, 1949 to 1958[a]

Calendar Year	Composite Retail Price	Retail Equivalent Value of 1 lb. Carcass Pork	Stockyard Price B1 Hogs	By-Product Value	Farm (Stockyard) Price Less By-Products	Farm (Stockyard) -Retail Spread	Farmer's Share (Stockyard Basis) of Retail Value
	(¢/lb.)	(¢)	(¢/carcass lb.)	(¢/carcass lb.)	(¢/carcass lb.)	(¢)	(%)
1949	54.4	41.9	29.6	2.0	27.6	14.3	65.9
1950	53.4	41.1	28.4	1.8	26.6	14.5	64.7
1951	60.0	46.2	32.6	2.3	30.3	15.9	65.6
1952	52.2	40.2	25.4	1.3	24.1	16.1	60.0
1953	59.4	45.7	28.6	1.5	27.1	18.6	59.3
1954	62.2	47.9	30.0	1.8	28.2	19.7	58.9
1955	50.2	38.7	23.8	1.4	22.4	16.3	57.9
1956	52.0	40.0	24.4	1.5	22.9	17.1	57.3
1957	59.0	45.4	29.1	2.0	27.1	18.3	59.7
1958	57.9	44.6	26.8	1.6	25.2	19.4	56.5

[a] Adapted from price spread study of pork in Volume III where a fuller explanation of procedure etc. is given.

plastic. The British Columbia Federation of Agriculture pointed out to us in Vancouver, for example, that it is relatively more expensive to package sliced bacon in half-pounds than in pounds.

There is a seasonal tendency for pork price spreads to be more narrow during the first half of the year and wider during the latter half. This tendency can be explained by the seasonal hog marketing pattern, already referred to, and a lag in retail prices. Prices for hog carcasses usually advance during the first half of the year when hog marketings are declining. Since retail prices tend to lag behind stockyard prices during upward and downward movements, price spreads are narrower on the upswing in the first half of the year, and wider during the downswing in the second half of the year. When pork prices are rising or high, there is some resistance at retail to higher prices because of the ready substitution of other meat (notably beef) for pork. When pork prices are falling or low, there seems to be a tendency to resist decreases in marketing margins. The seasonal pattern of the farmer's share is inverse to that of the spread, i.e., the share tends to be larger during the spring and summer and smaller during autumn and winter.

At its public hearings in Winnipeg, the Commission was told that the support level on hogs in Winnipeg was lower than in Toronto by considerably more than the costs of shipping from Winnipeg to Toronto. We have referred this complaint to the Agricultural Stabilization Board.

In Toronto, we were told that the farmer gets no payment for hog by-products. Although no specific allowance is made for by-products, we are satisfied that hog prices are arrived at with probable by-product values taken into account by both parties to the deal.

It was also suggested to us in Toronto that the official carcass grade should be carried through to the retail level. It is true that C-grade carcasses may be upgraded as well as downgraded, but first-class cuts are thus obtained only by trimming off more fat than from higher-grade carcasses. When rendered and sold as lard, this fat sells at a much lower price than pork meat. Consequently, the packers apparently make more money on the higher-grade carcasses than on the lower grades.

DAIRY PRODUCTS[1]

Over the decade 1949 to 1958 farm cash income from dairy products increased almost continuously. In 1950 Canadian farmers received $343 million from the sale of dairy products and in 1958 this income had risen to $495 million. For the decade as a whole farm cash income from the sale of dairy products accounted for 16.2% of total cash income from farm products. Dairy products are also next in importance to meat in the family food basket, accounting for about 18% of consumer expenditures on all foods.

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[1] The main references in our public hearings on this subject were: Vancouver, *Proceedings*, Vol. 1, pp. 76-80 and Vol. 2, pp. 204, 206-7, 209, 221-36, 246-8, 262-73, 277; Edmonton, Vol. 4, pp. 547-9, 551-3 and Vol. 5, pp. 663-5, 731-7; Regina, Vol. 8, pp. 1249-77; Fredericton, Vol. 10, pp. 1735-48 and Vol. 10A, pp. 1815-8; Halifax, Vol. 13, pp. 2154-5, 2169-78; St. John's, Vol. 14, pp. 2185-93; Toronto, Vol. 15, pp. 2312-4, 2347-50, 2381-4, 2394-8, 2420-4, 2455-62 and Vol. 16, pp. 2501-5, 2519-24, 2536-7, 2650, 2654-8, 2699-702; Montreal, Vol. 20, pp. 3261-84, 3315-6; Ottawa, Vol. 23, pp. 3719-24, 3744-5, Vol. 25, pp. 3921, 3936-9, 3951-2, Vol. 26, pp. 4126-8, Vol. 27, pp. 4324-7 and Vol. 29, pp. 4594-620.

Over the decade of study as a whole, total milk production has shown an upward trend. For the first four years of the decade, however, production declined; the increase has taken place since 1952. In 1958 production reached an all-time record of 18 billion pounds. Milk production increased in spite of a decrease in the number of cows. The production of milk per cow increased substantially over the period due to better quality cattle, better feeding and better management of dairy herds.

The annual per capita consumption of dairy products, in terms of fluid milk, averaged close to 1,000 pounds over the decade. However, there was a slight decrease in the per capita consumption of dairy products as a whole over the period, largely because of a decline in butter consumption.

Cows' milk contains about 87% water and about 13% solids (including fat and non-fat solids mainly in the form of proteins, calcium, phosphorous and riboflavin). Milk is a highly perishable product and special care must be taken to safeguard its purity for the health of consumers. This, of course, has a definite bearing on marketing costs and the price to consumers. Milk can be used in many ways: as fluid milk, in manufacture of butter, cheese, ice cream and concentrated products. These products require a wide variety of processing and packaging.

Fluid milk is usually consumed within the district of production while many manufactured dairy products enter interprovincial and export trade. consequently there are local, provincial and federal regulations that apply to milk and milk products. According to these regulations all dairy products have to meet prescribed standards of composition, packing and marking before being marketed. Although the marketing of fluid milk and of manufactured milk products includes the same three major functions of assembly, processing, wholesaling and retailing, these functions are usually performed by the same firm in the case of fluid milk, but for manufactured milk products the functions are performed by several specialized firms. For manufactured milk products other than butter these operations are more varied and costly, and this is reflected in wider marketing margins and smaller farm shares than for fluid milk.

Table 41—Total Milk Production and Utilization as a Per Cent of Production, Canada, 1949 to 1958[a]

Calendar Year	Production	Used in Manufacture				Used on Farms	
		Fluid Sales Milk & Cream	Creamery Butter	Cheese	Concentrated Milk & Ice Cream	Dairy Butter	Other Purposes
	(million lb.)	(%)	(%)	(%)	(%)	(%)	(%)
1949	15,918	28.1	41.2	8.5	7.0	4.6	10.6
1950	15,322	29.7	40.0	7.5	7.6	4.2	11.0
1951	15,310	30.2	39.3	6.9	8.6	4.1	10.9
1952	15,309	28.3	42.9	5.3	9.0	3.4	11.0
1953	16,036	28.4	44.2	5.7	8.3	2.8	10.6
1954	16,528	28.5	44.3	6.2	8.2	2.4	10.4
1955	16,946	29.3	44.0	5.7	8.6	2.1	10.3
1956	16,966	30.9	41.8	6.1	8.9	1.9	10.4
1957	17,306	31.1	41.0	7.0	9.2	1.7	10.0
1958	18,057	30.4	43.6	6.2	8.6	1.5	9.7

[a] Source: D.B.S. *Dairy Statistics*, Ottawa, annual.

A statistical profile of the Canadian dairy industry over the last 10 years is presented in Table 41 which shows total milk production and the proportion of its utilization in manufacture, fluid sales and farm use. From this table we can see that fluid milk and butter together account for almost three-quarters of the total milk supply. The remainder of about 25% is used in the manufacture of cheese, concentrated milk products, dairy (farm) butter, and for farm consumption. The growing importance of concentrated products and ice cream is evident as is the relative decline in the utilization of milk for dairy butter and cheese.

Fluid milk accounts for 30% of total milk utilization and its total annual consumption has been increasing during the decade. However, this total increase in consumption was due to the increase in population since the per capita consumption showed a slight and almost continuous decline over the period. Consumer expenditures on fluid milk increased in relation to total food expenditures, however, from 7.8% in 1953 to 8.0% in 1955 and 9.3% in 1957. Although fluid milk sales account for 30% of total milk production, farmers receive for their fluid milk close to 48% of their cash income from all dairy products because the farm price for fluid milk is higher than for any other use. The trend in several provinces towards an increasing proportion of milk being marketed in the fluid form has, therefore, been a welcome one to dairy farmers.

The production of creamery butter which reached an all-time record in 1958 has been changing considerably from year to year over the last decade. Between 39% and 44% of the total milk production has been used in the manufacture of creamery butter and for this farmers received close to 37% of their cash income from dairying.

The per capita consumption of butter has been declining. Over the decade the decline in per capita consumption of butter amounted to three pounds. For the same period there was an increase of three pounds in the per capita consumption of margarine. This shows that increased margarine consumption is offsetting the decreased butter consumption with no change in the total per capita consumption of these two agricultural products. In 1958 butter consumption dropped 20.4 million pounds compared with 1957. This decrease in butter consumption was due to the increase in butter prices, relative to the prices of substitutes, that resulted from a six-cent-per-pound increase in the butter price support. The per capita consumption of butter in 1958 dropped by about 6% from 1957, and the per capita consumption of margarine increased by close to 9%.

Cheese production has fluctuated greatly in the last 10 years, but the general trend in production has been downward. The pattern of production of particular kinds of cheese differs considerably, however. Whereas cheddar production has been declining, the production of process and cottage cheese has been increasing. The per capita consumption of cheese has shown an increase over the decade. About 6.5% of milk has been used for the production of all varieties of cheese and that portion of milk accounted for close to 6.0% of farm cash income from the sale of dairy products. The export of cheese, which in past decades amounted to many million pounds annually, has dropped substantially during the decade of study and the quantities exported have varied greatly from year to year.

Of the group of concentrated milk products, evaporated whole milk, skimmed and whole milk powder, condensed whole milk and partly-skimmed evaporated

milk were produced in increasing quantities. Evaporated whole milk and skimmed milk powder account for over 80% of the production of this group. Over the decade, the production of skimmed milk powder has increased almost three times—the highest rate of increase of all dairy products. A very important development in the dry skimmed milk industry has been the "instant" type of milk powder and this convenience has been a contributing factor to the increase in household consumption. There has also been a considerable increase in the production of ice cream. Over the decade, the per capita consumption of concentrated milk products and ice cream has increased by almost 30%, in sharp contrast to the decreasing consumption per capita of butter and fluid milk. For the 8.4% of the total milk used for concentrated milk products and ice cream farmers received about 8.5% of their dairy farm cash income.

Over the decade, an increasing concentration in the dairy industry at the farm, processing and distribution levels has been evident. The number of farms reporting milk cows is decreasing and the number of milk cows per farm is increasing. At the same time total milk production and production per cow has been increasing. The concentration of the dairy processing and distributing industry, however, is proceeding at a much faster rate. The dairy plants are growing larger and multiple-product plants are taking over several functions which in the past were performed by many specialized plants. Large factories are now producing butter, cheese, concentrated milk products and ice cream. On the whole, the total production of dairy products exceeds the domestic disappearance. Since Canadian wholesale prices for many dairy products are higher than in other countries, this creates a problem of unsold stocks. Also, on the domestic market some of the dairy products encounter strong competition from margarine and other substitute products. The federal price support program for butter and certain other dairy products has led to large carry-overs.[1]

Dairying is widely but unevenly dispersed across Canada. The provinces of Ontario and Quebec, taken together, produce over two-thirds of the total milk production in Canada. Second in importance are the Prairie Provinces with over one-fifth of the total production. Over the decade of study, Quebec showed the highest rate of increase in milk production, and in the last three years emerged as the leading milk-producing province. In central Canada the essential factor contributing to the development of dairying has been the proximity of large cities and industrial centres and the suitability of the climate and soil. Over two-thirds of the creamery butter and up to 95% of the cheddar cheese is produced in Quebec and Ontario. Ontario has been for a long time the principal producer of cheddar cheese and Quebec has been the principal producer of creamery butter.

The production of milk has a well-pronounced seasonal pattern. It is above the annual average during the summer months and well below the average in the winter months. The extra milk that comes during the flush pasture season April through September is used in the manufacture of creamery butter, cheese and concentrated milk products. The farm prices for all dairy products are generally lowest during the months of high production and highest during the months of low production. However, because of the federal price support for creamery butter, cheese and skimmed milk powder and because of provincial

[1] We also refer to the butter price support program in Part II.

provisions for establishing minimum prices for fluid milk, the overall fluctuations in farm prices are tempered. The retail prices of dairy products show a marked seasonal stability.

With regard to year-to-year changes in farm and retail prices for dairy products there were three distinct phases in the last decade. Between 1949 and 1951 farm prices showed a rather sharp increase, from 1951 to 1956 they remained almost stationary, and after that they started to rise again. Retail prices rose until 1952, remained fairly stable until 1956, and since then they have risen again. Over the whole decade retail prices increased by 22.5% and farm prices by 15.8%.

The results of our calculations of farm-whole sale-retail spreads for fluid milk, evaporated whole milk, plain process cheese, creamery butter and the dairy products group as a whole are summarized in the following five tables and shown in the accompanying charts. All these estimates are based on average prices for Canada and relate to the decade 1949 to 1958.

The Price Spread on Fluid Milk

Table 42 and Chart 19 show that farm and retail prices for fluid milk rose from 1949 to 1952, remained almost steady until 1956, and then in 1957 began to rise again. The rise in retail prices, however, was faster, and this made the farm-retail spread wider and the farmer's share smaller. Over the decade, the farm-retail spread for fluid milk increased fastest among the dairy products group. Increased processing and delivery costs, particularly payrolls and containers, appear to have been the main reasons for the widening spread.

The Price Spread on Evaporated Whole Milk

In order to make one pound of evaporated milk, 2.3 pounds of fluid milk have to be used, and in addition this milk has to be put through the manufacturing process and then canned, hermetically sealed, packed in shipping cases, and transported to different places for distribution through various commercial channels. Although there have been fluctuations in farm, wholesale and retail prices of

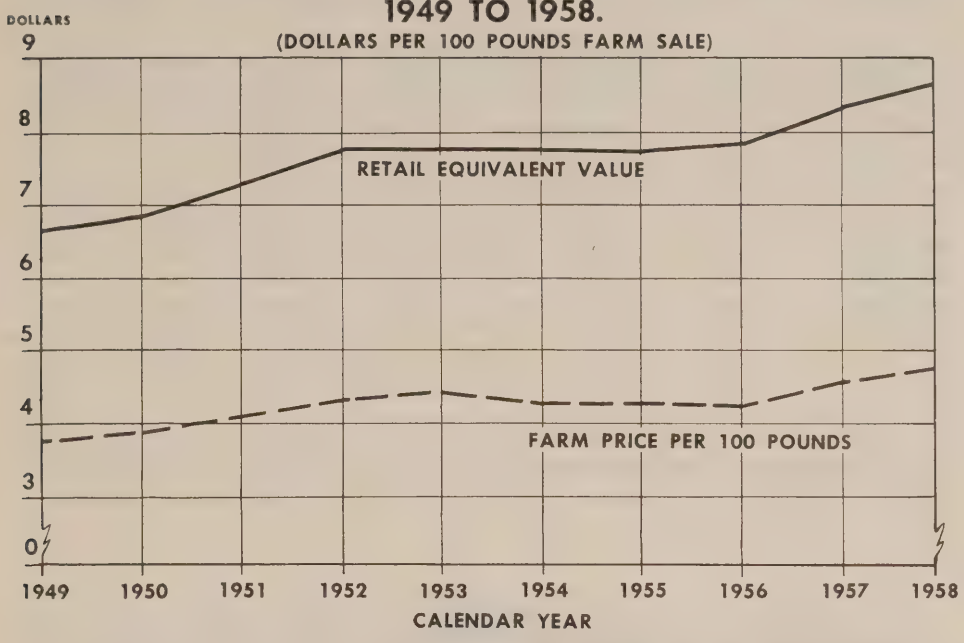
Table 42—Summary of Calculations of Farm-Retail Spread on Fluid Milk, Canada, 1949 to 1958[a]

Calendar Year	Retail Price	Retail Equivalent Value of 100 lb. Farm Sale	Farm Price	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/qt.)	($)	($/100 lb.)	($)	(%)
1949	17.8	6.70	3.85	2.85	57.5
1950	18.3	6.89	3.91	2.98	56.7
1951	19.6	7.38	4.08	3.30	55.3
1952	21.1	7.94	4.39	3.55	55.3
1953	21.1	7.94	4.41	3.53	55.5
1954	21.1	7.94	4.37	3.57	55.0
1955	21.1	7.94	4.33	3.61	54.5
1956	21.2	7.98	4.32	3.66	54.1
1957	22.5	8.47	4.53	3.94	53.5
1958	23.2	8.73	4.62	4.11	52.9

[a]Adapted from price spread study of dairy products in Volume III where a fuller explanation of procedure etc. is given.

CHART 19

PATTERN OF FARM-RETAIL VALUES FOR FLUID MILK, CANADA, 1949 TO 1958.



evaporated milk from year to year over the decade, the general relationship between these prices has not changed significantly. As a result, the farmer's share of the retail value changed by less than 1% between 1949 and 1958. The farm-retail spread increased by 10% over the decade, which is relatively moderate. Whereas the farm-wholesale spread was almost the same in 1958 as in 1949 the retail spread increased appreciably. As a result, the retailer's share of the retail price increased from about 14.9% in 1949 to 19.0% in 1958 (Table 43 and Chart 20).

The Price Spread on Plain Process Cheese

The farmer's share of the retail price is smaller for plain process cheese than for the other principal dairy products. Process cheese has to go through a double operation—first a cheddar cheese has to be made, and then the cheddar is processed with the addition of several ingredients. From Table 44 and Chart 21 we can see that the rise in retail prices of process cheese, although very uneven, was more pronounced than the rise in farm prices of cheese milk. Consequently the farmer's share of the retail price declined, from 39.5% in 1949 to 34.1% in 1958. The farm-retail spread widened substantially between 1949 and 1952, then declined for a few years, and in 1958 it was at the same level as in 1952. The main reasons for the widening spread were the addition of more processing services, such as cutting into smaller sizes or slices, and more packaging and advertising.

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Table 43—Summary of Calculations of Farm-Wholesale-Retail Spreads on Evaporated Whole Milk, Canada, 1949 to 1958[a]

Calendar Year	Retail Price	Retail Equivalent Value of 100 lb. Farm Sale	Wholesale Equivalent Value of 100 lb. Farm Sale	Farm Price	Farm-Retail Spread	Retailer's Share of Retail Value	Farmer's Share of Retail Value
	(¢/16-oz. tin)	($)	($)	($/100 lb.)	($)	(%)	(%)
1949	14.8	6.44	5.48	2.69	3.75	14.9	41.8
1950	14.6	6.35	5.39	2.61	3.74	15.1	41.1
1951	16.1	7.00	6.09	3.09	3.91	13.0	44.1
1952	16.4	7.13	5.96	2.76	4.37	16.4	38.7
1953	15.4	6.70	5.52	2.54	4.16	17.6	37.9
1954	15.4	6.70	5.52	2.52	4.18	17.6	37.6
1955	15.1	6.57	5.35	2.52	4.05	18.6	38.4
1956	14.8	6.44	5.35	2.59	3.85	16.9	40.2
1957	15.7	6.83	5.61	2.81	4.02	17.9	41.1
1958	16.2	7.04	5.70	2.88	4.16	19.0	40.9

[a]Adapted from price spread study of dairy products in Volume III where a fuller explanation of procedure etc. is given.

CHART 20

PATTERN OF FARM-WHOLESALE-RETAIL VALUES FOR EVAPORATED WHOLE MILK, CANADA, 1949 TO 1958.

(DOLLARS PER 100 POUNDS FARM SALE)

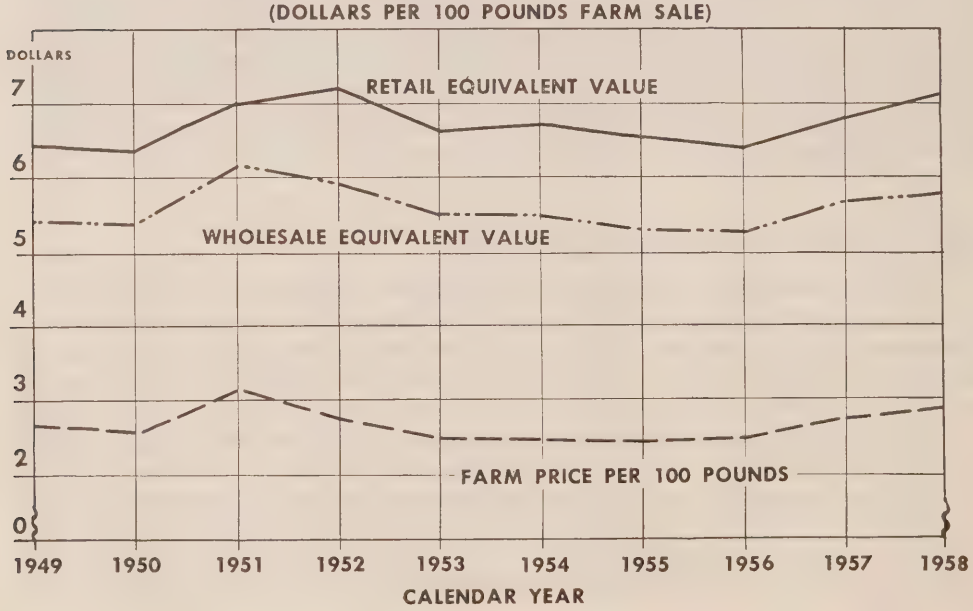


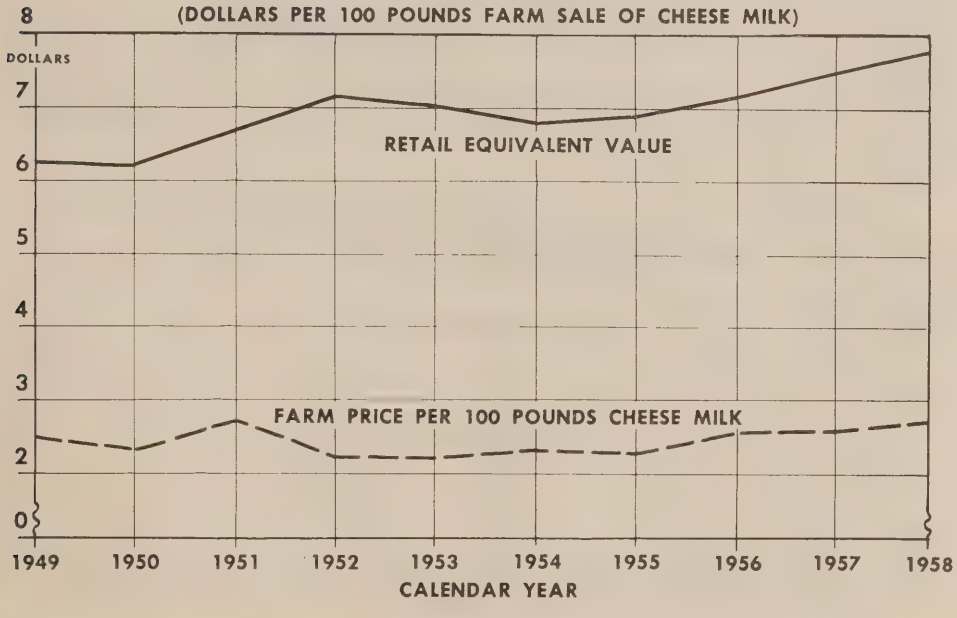
Table 44—Summary of Calculations of Farm-Retail Spread on Plain Process Cheese, Canada, 1949 to 1958[a]

Calendar Year	Retail Price	Retail Equivalent Value of 100 lb. Farm Sale of Cheese Milk	Farm Price for Cheese Milk	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/½-lb.)	($)	($/100 lb.)	($)	(%)
1949	29.2	6.20	2.45	3.75	39.5
1950	29.0	6.16	2.23	3.93	36.2
1951	32.4	6.88	2.74	4.14	39.8
1952	33.8	7.18	2.16	5.02	30.1
1953	33.0	7.00	2.16	4.84	30.6
1954	32.6	6.92	2.20	4.72	31.8
1955	32.9	6.98	2.17	4.81	31.1
1956	33.7	7.15	2.47	4.68	34.5
1957	35.6	7.56	2.59	4.97	34.4
1958	35.9	7.62	2.60	5.02	34.1

[a]Adapted from price spread study of dairy products in Volume III where a fuller explanation of procedure etc. is given.

CHART 21

PATTERN OF FARM-RETAIL VALUES FOR PLAIN PROCESS CHEESE, CANADA, 1949 TO 1958.



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The Price Spread on Creamery Butter

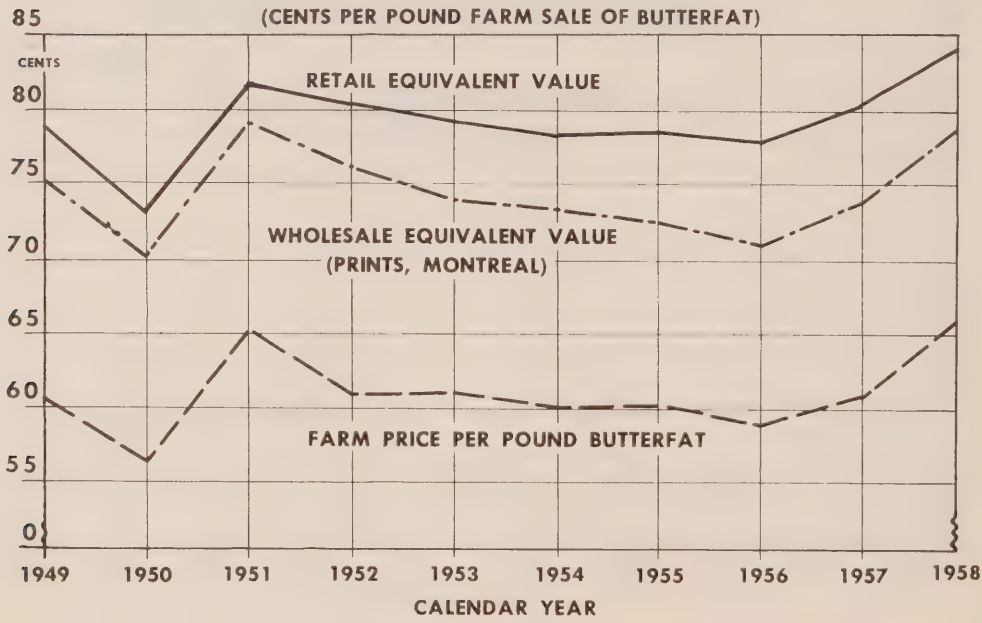
Butter is the only dairy product which has shown a slight decrease in the farm-retail spread and an increase in the farmer's share of the retail price. The farmer's share increased from 76.3% in 1949 to 78.2% in 1958, and at the same time the farm-retail spread decreased from 18.7¢/lb. butterfat to 18.4¢/lb. butterfat. The probable reasons for this are presented towards the end of this section on dairy products. There was close conformity in the pattern of price fluctuations over the decade at the farm, wholesale and retail levels. They declined sharply in 1950, rose equally sharply in 1951, then declined slowly until 1956. Since then they have showed a rather sharp increase. A breakdown of the farm-retail spread shows that over the decade the retail spread has been increasing while the farm-wholesale spread has been decreasing. The retailer's share of the retail price increased from 4.1% in 1949 to 6.8% in 1958. Calculations of farm-wholesale-retail spreads on butter in Montreal and Winnipeg will appear in Volume III. (Table 45 and Chart 22.)

The Price Spread on the Dairy Products Group as a Whole

Table 46 and Chart 23 summarize the equivalent farm and retail values for all dairy products bought each year by the average urban Canadian family over the decade 1949 to 1958. The quantity of each dairy product that is included

CHART 22

PATTERN OF FARM-WHOLESALE-RETAIL VALUES FOR BUTTER, CANADA, 1949 TO 1958.



in these calculations is based on a Dominion Bureau of Statistics survey made in 1953. The calculations suggest that the value of dairy products bought annually by the average family increased from $164.25 in 1949 to $197.20 in 1958 while the equivalent farm value for these products increased from $96.73 to $110.80. Accordingly, the farmer's share for all milk used in the various dairy products dropped from 58.9% in 1949 to 55.9% in 1958.

Frequently in the public hearings, the Commission's attention was drawn to various aspects of the marketing of dairy products, particularly fluid milk. In general, we have taken the stand that fluid milk marketing is a provincial concern, and so our comments upon it here will not be prescriptive.

The most frequent representations on the subject of fluid milk marketing were made to us by provincial and federal associations of consumers. Evidently the consumers feel strongly that they should have formal representation on milk

Table 45—Summary of Calculations of Farm-Wholesale-Retail Spreads on Creamery Butter, Canada, 1949 to 1958[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 lb. Butterfat	Wholesale Equivalent Value of 1 lb. Butterfat	Farm Price Butterfat	Farm-Retail Spread	Retailer's Share of Retail Value	Farmer's Share of Retail Value
	(¢/lb.)	(¢)	(¢)	(¢/lb.)	(¢)	(%)	(%)
1949	64.6	78.8	75.6	60.1	18.7	4.1	76.3
1950	60.3	73.6	70.8	56.2	17.4	3.8	76.4
1951	67.8	82.7	79.3	65.4	17.3	4.1	79.1
1952	66.2	80.8	76.1	61.8	19.0	5.8	76.5
1953	65.0	79.3	74.4	61.2	18.1	6.2	77.2
1954	64.0	78.1	73.1	60.6	17.5	6.4	77.6
1955	64.1	78.2	72.8	60.2	18.0	6.9	77.0
1956	63.5	77.5	71.5	59.8	17.7	7.7	77.2
1957	65.7	80.2	74.1	61.8	18.4	7.6	77.1
1958	69.2	84.4	78.7	66.0	18.4	6.8	78.2

[a]Adapted from price spread study of dairy products in Volume III where a fuller explanation of procedure etc. is given.

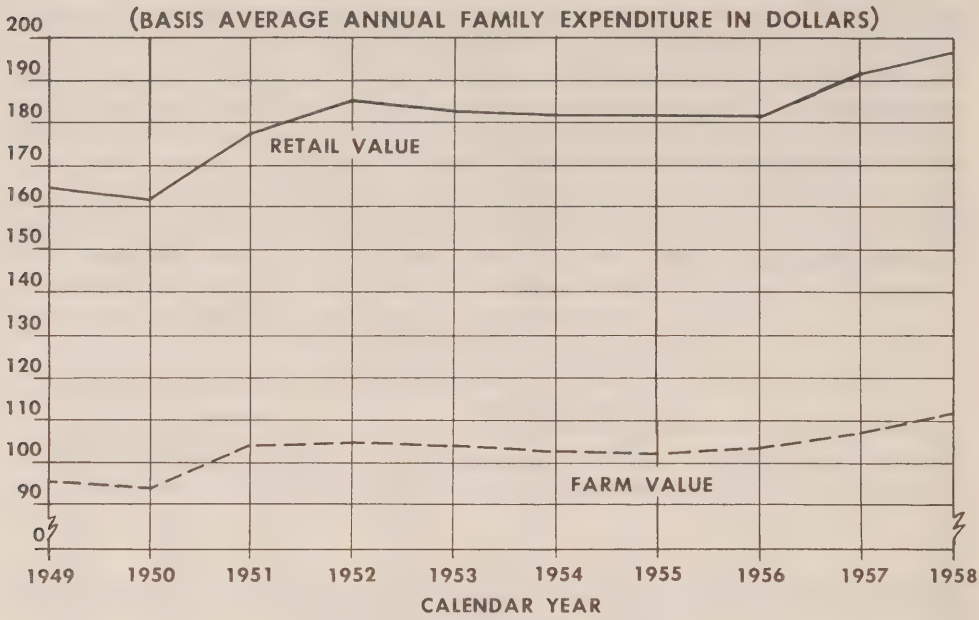
Table 46—Summary of Farm-Retail Spreads,[a] Dairy Products Group, Canada, 1949 to 1958[b]

Calendar Year	Retail Value	Farm Value	Farm-Retail Spread	Farmer's Share of Retail Cost
	($)	($)	($)	(%)
1949	164.25	96.73	67.52	58.9
1950	162.89	94.42	68.47	58.0
1951	178.26	104.58	73.68	58.7
1952	185.03	104.03	81.00	56.2
1953	182.52	103.04	79.48	56.4
1954	181.51	102.32	79.19	56.4
1955	181.43	101.58	79.85	56.0
1956	181.59	102.22	79.37	56.3
1957	191.32	106.68	84.64	55.7
1958	197.90	110.80	87.10	55.9

[a]Based on annual expenditures on all dairy products made by the average Canadian urban family.
[b]Adapted from price spread study of dairy products in Volume III where a fuller explanation of procedure etc. is given.

CHART 23

PATTERN OF FARM-RETAIL VALUES FOR DAIRY PRODUCTS GROUP, CANADA, 1949 TO 1958.



boards. The consumers also want quantity discounts at retail and a store price differential. The consumers believe that formula pricing of milk at the producer level leaves out one vital variable—an index of productivity in dairying. We were also told that there is wasteful overlapping and frequency in milk delivery which is probably the highest cost item. The British Columbia and Alberta Federations of Agriculture argued in favour of setting minimum retail, as well as farm, prices for milk, contending not only that this provides stability in the industry but also keeps the spread narrow.

We became interested during the hearings in why the farmer's share of the retail price of butter is normally higher than for nearly every other food product and why the price spread on butter narrowed during the period of study. The only commodity with a higher farm share (and it is only an occasional exception) is eggs. The explanation seems to be: (1) the farm price for butter-fat is actually a delivered price to the creamery, and hence important hauling costs are already excluded from the farm-retail spread; (2) butter processing is a simple operation and processing costs have been reduced by large plants and the installation of a few continuous butter-making machines; (3) butter packaging also continues to be a simple operation; (4) with fewer and larger retail accounts, processors may have been able to reduce their selling costs; (5) traditionally, the retail markup is small compared with most foods, probably because butter has a high value per unit of volume and a rapid turnover and perhaps it has also become a sort of

permanent "come-on" or "leader"; (6) the federal government absorbs some of the costs of storage both through its price support operations and by its subsidies to cold storage, and sometimes resells butter at less than its purchase price; (7) keen competition with margarine at retail prevents the retail price from rising much without a sharp curtailment in butter consumption.

We noted earlier that process cheese undergoes a double processing, first as cheddar and then as process cheese. This helps to explain why the farmer's share of the retail price of process cheese is lower than for other major dairy products. The advent of consumer-size packaging and slicing of the cheese certainly adds to the costs of marketing. It was suggested to us, however, that the public wants it that way, otherwise they would not buy it. We were glad to hear that economies have been introduced at retail during our period of study by centralized cutting and cellophane packaging of cheese. This saves time and reduces spoilage. In view of the fact that so many packages of cheese are less than a pound, we are of the opinion that on each package of cheese at retail should be marked the price per pound as well as the price for the package. And we are not convinced that the branding and advertising of cheddar cheese is a desirable turn of events. It seems to us like gilding the lily.

POULTRY AND EGGS

The poultry and egg industry ranks high among our major food industries. Over the decade 1949 to 1958 cash farm income from the sale of poultry and eggs ranged about a rising trend from a low of $170 million in 1950 to a high of $295 million in 1956. Over the decade as a whole, cash income from poultry and eggs accounted for 9.8% of total cash income from farm products. Consumers are spending on poultry and eggs about 8% of their total expenditure on food. The per capita consumption of these two products, particularly poultry, showed a well-pronounced upward trend over the decade. Between 1949 and 1958 the per capita consumption of eggs increased from 19.3 dozen to 24.8 dozen annually, and the per capita consumption of poultry (eviscerated basis) increased from 15.8 pounds to 26.6 pounds.

POULTRY[1]

The poultry industry of the last few years contrasts sharply in many ways with 10 or 15 years ago.[2] The production of chickens and turkeys, which for many years had been a sideline activity on most farms, has changed considerably. Although there are still several thousand farms that maintain small flocks on a non-commercial or semi-commercial basis, specialization in production is now firmly established in many regions of the country and is continuously increasing. Poultry is sold by the farmer both on live-weight and rail-graded basis.

[1] The main references in our public hearings on this subject were: Vancouver, *Proceedings,* Vol. 1, pp. 48-50, and Vol. 2, p. 283; Toronto, Vol. 15, pp. 2426, 2930-1; Ottawa, Vol. 24, pp. 3838, 3845.

[2] See our discussion in Part II, Chapter 1, Section 2.

Poultry processors now take special interest in the type of bird grown and in its feeding. Large-scale, highly-mechanized processing plants have come into existence, in contrast with the mainly manual operations prior to our period of study. Great progress has been made in cooling and packaging. By eviscerating the birds at the plant, freight is saved on the offal (20% to 30% of the live weight) through subsequent stages in distribution.

There has been considerable change over the last 10 years in the channels for selling poultry. While the old practice of farmers selling directly to consumers is still followed on public markets and through private connections, an increasing proportion of poultry marketing is done through registered (processing) stations which do their own wholesaling. Some poultry processors, particularly processors of turkeys, market through jobbers. In 1951 only about one-quarter of the poultry produced was marketed through registered stations, but in 1958 the registered stations marketed about 60% of the total production. Usually, the processors buy live birds from the farm and quickly put them through an assembly-line for grading and evisceration. Within a day or two the ready-to-cook birds are forwarded in chipped ice to retail stores or restaurants. The bulk of broilers is sold through retail outlets in this way; it keeps the meat fresh and of high quality. Broilers are frequently priced by supermarkets as a special.

A decade ago, poultry was normally sold on the New York dressed basis. This changed to head and feet off, and now it is sold almost exclusively on an eviscerated basis. Poultry is marketed mainly in the form of carcass meat for consumer use. Poultry cuts such as legs, breasts, wings and backs are also sold separately, and are becoming increasingly prominent on the market. The carcass poultry are packed for distribution in crushed ice or frozen in plastic bags; poultry parts are packaged or sold in bulk. Another important outlet for poultry is barbecue restaurants. Poultry is also marketed canned, and in soups and prepared pies.

Location, climate and proximity to the large consuming centres have made for some regional differences in poultry production and marketing. In the production of chicken broilers, however, climate is no longer a limiting factor. The large-scale commercial production and processing of poultry have been made possible by investment in scientific and technological developments. These characteristics and changes apply most prominently to the broiler industry, where the overall growth has been remarkable. In 1955 about 20 million chicks were hatched for broiler production, and in 1958 this number had more than tripled. The large-scale production of broilers has sprung up mainly around major urban markets. Another feature of the modern broiler industry is its year-round operation which reduces the marked seasonal fluctuations that occurred in the past, and at the same time assures the consumer a readily-available and fresh product. Although the breeding, hatching, mixing of feed, raising and marketing operations in the broiler industry tend to be specialized, there has been a conspicuous trend, particularly in Ontario, towards at least partial financial integration. The farmers often raise the broilers under contract to a processing firm, feed manufacturer or feed merchant.

The total marketings of chickens and fowl still show seasonal variations, however, being well below average between January and June and above average for the rest of the year. Farm prices for poultry, however, exhibit rather small seasonal fluctuations.

Ontario is the largest producer of broilers in Canada. Over the last few years this province alone accounted for about 60% of the total broiler production. Second in importance is Quebec, followed by British Columbia and the Prairie Provinces. The production of broilers on the Prairies is increasing rapidly, and shows the highest rate of increase in Canada.

The results of our calculations of the farm-retail spread on chicken broilers are presented in Table 47 and shown in Chart 24. These estimates are based on

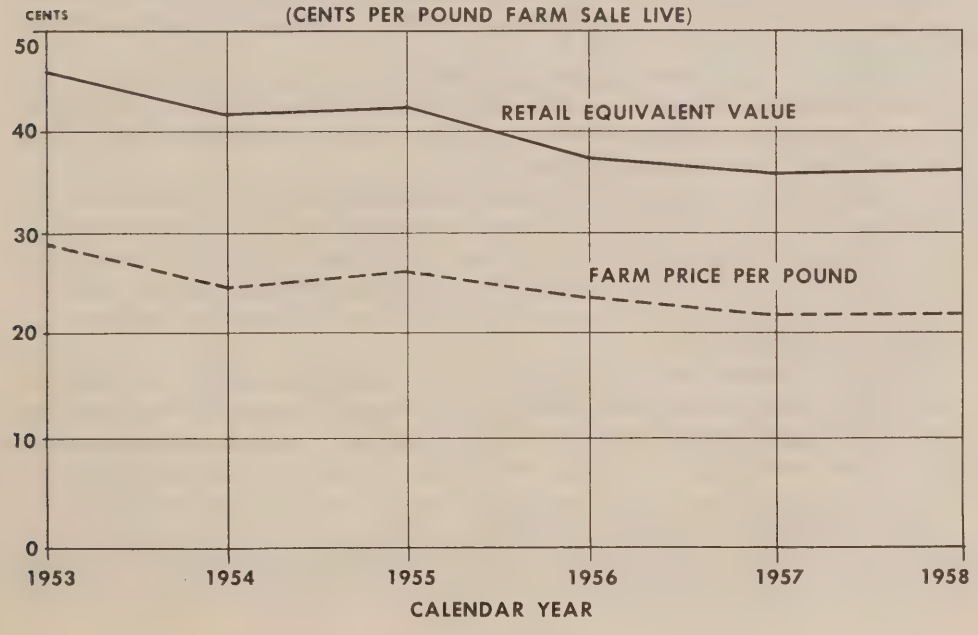
Table 47—Summary of Calculations of Farm-Retail Spread on Chicken Broilers (Eviscerated), Canada, 1953 to 1958[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 lb. Live	Farm Price Live	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/lb.)	(¢)	(¢/lb.)	(¢)	(%)
1953	63.6	46.4	29.1	17.3	62.7
1954	56.1	41.0	24.1	16.9	58.8
1955	57.2	41.8	26.6	15.2	63.6
1956	52.8	38.5	23.0	15.5	59.7
1957	52.0	37.9	21.8	16.1	57.5
1958	51.1	37.3	21.5	15.8	57.6

[a]Adapted from price spread study of poultry and eggs in Volume III where a fuller explanation of procedure etc. is given.

CHART 24

PATTERN OF FARM-RETAIL VALUE FOR CHICKEN BROILERS, CANADA, 1953 TO 1958.



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national averages and cover the 1953 to 1958 period for which data are available. Farm-wholesale-retail spreads on broilers in Toronto and Winnipeg are presented in Volume III.

Broilers are one of the few farm food products which show a well-pronounced downward trend in both retail and farm prices over the period 1953 to 1958. Also (more remarkably) the farm-retail spread in Table 47 shows a narrowing tendency. This was a result of the technological and commercial developments in the industry which were mentioned above. Between 1953 and 1958 the farmer's share of the retail price dropped from 62.7% to 57.6%.

EGGS[1]

An egg is a perishable commodity which begins to deteriorate in quality immediately after it is laid. Proper cooling and humidity, however, retard this loss of quality. An egg is also fragile, and must, therefore, be handled with special care and packaged in expensive containers. In grading, each egg has to be candled individually to ascertain interior quality.

Eggs are used in the form of shell eggs or dried and frozen egg products. Most of the eggs produced (about 95%) are marketed as shell eggs. Dried and frozen eggs are used mainly in the baking industry.

Egg production reached its first postwar peak in 1947, and then declined for a few years, but it has increased again since 1951. Over the decade 1949 to 1958 the increase in production was about 46%. In 1958 egg production reached an all-time record of 450 million dozen.

The export of eggs has been very unstable, ranging during the decade from 1% to 14% of total production. For the period as a whole exports averaged close to 4% of production, which indicates that this commodity is almost entirely dependent on the domestic market.

Although an increasing proportion of poultry is being marketed through the registered stations, the trend is just the opposite in the case of eggs. In 1949 about 54% of all eggs were marketed through registered egg grading stations, but by 1958 this proportion had dropped to 45%.

The increase in production of eggs resulted from more hens and an increased output per bird. Also there has been improvement in the quality of eggs produced and, as a result, the proportion of lower grades has been reduced. On the whole, about 86% of eggs produced are Grade A. These developments have resulted from marked improvements during the decade in the breeding, feeding and management of poultry.

Extreme seasonal fluctuations in production and price, probably greater than for any other farm product, have characterized the egg industry. Although seasonal variations in egg marketings have decreased considerably in the last few years, they are still pronounced. Egg marketings are usually well above the average during the

[1] The main references in our public hearings on this subject were: Vancouver, *Proceedings*, Vol. 1, pp. 55-7, 152 and Vol. 2, pp. 282-3; Edmonton, Vol. 4, pp. 570-2, 584-6; Winnipeg, Vol. 6, pp. 760-1, 854-9, 876-9 and Vol. 7, pp. 1050-2; Regina, Vol. 8, pp. 1232-9 and Vol. 9, pp. 1414-7; Fredericton, Vol. 10, pp. 1725, 1762-3; St. John's, Vol. 14, pp. 2196-9; Toronto, Vol. 15, pp. 2424-6, 2448-51 and Vol. 16, pp. 2499, 2525-9 and Vol. 18A, pp. 2-10; Ottawa, Vol. 23, p. 3714.

first half of the year and then fall below the average for the remainder of the year. For economical operation, specialized egg producing enterprises need to be used as near as possible to full capacity throughout the year. The result has been a lessening of the severity of seasonal variations in egg production and of the costs of compensating storage. The federal price support on eggs has also had a stabilizing effect on seasonal prices. Seasonal variations are much stronger in the Prairies than in the rest of the country. This is mainly because of numerous small flocks and severe winters. In Saskatchewan almost half of the eggs produced in a year are marketed during the four-month period March to June.

There is also a seasonal pattern in prices for the different grades of eggs. The spread in prices among different grades is narrowest during the period of heavy marketings and widest in the early autumn when marketings are at their lowest level. This seasonal pattern in price differentials for higher and lower grades seems to be the result of seasonal changes in the proportion of the different grades produced. During the season of heavy production a much higher proportion of "A" eggs is produced than during the season of low production.

Ontario is the leading province in the production of eggs, followed by Quebec, Alberta, Saskatchewan, Manitoba, British Columbia and the Maritime Provinces. Over the decade 1949 to 1958 Ontario produced about 40% of the country's eggs, the three Prairie Provinces together about 29%, Quebec 15%, British Columbia 8% and the Maritime Provinces about 8%. Nova Scotia recorded the fastest rate of growth in egg production over the decade.

Small sideline farm flocks are still numerous in all provinces, but the trend is towards larger units, particularly in Ontario, Manitoba and British Columbia. In Canada all eggs are sold by grade and the producers are paid on a graded basis. The grading legislation provides that eggs may be graded either by a poultry producer or a registered grading station. The egg grading stations are under the supervision of the Federal Department of Agriculture. The marketing of eggs is carried out by producers, grading stations, wholesalers, jobbers and retailers. In the last decade, however, the role of the independent wholesalers in the marketing of eggs declined. Large chain stores often enter directly into contract with large producers. The wholesaling function in this case is performed by the producer who does his own grading or by the producer and the retailer.

The summary of our calculations of the farm-wholesale-retail spreads on eggs is presented in Table 48 and shown in Chart 25. These estimates are made for Grade "A" Large eggs only, which represent about 50% of total egg production.

Farm, wholesale and retail prices for eggs declined over the decade of study as a whole, with the farm price declining the fastest. Retail and wholesale prices dropped by about 8% but farm prices dropped by about 19%. Consequently, the farm-retail spread increased from 11.1¢ per dozen in 1949 to 16.2¢ per dozen in 1958. The increase in the spread took place in the farm-to-wholesale component. Increased grading (labour) costs seem to have been an important factor. Wholesalers' buying, collecting, selling and delivery costs also increased, because egg wholesalers have had to secure a larger proportion of their supplies from a larger number of smaller producers and resell them to small, more widely scattered retailers. The farmer's share of the retail price decreased from 81.5% in 1949 to 70.9% in 1958.

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Table 48—Summary of Calculations of Farm-Wholesale-Retail Spreads on Eggs "A" Large, Canada, 1949 to 1958[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 Doz. at Farm	Wholesale Equivalent Value of 1 Doz. at Farm	Farm Price	Farm-Retail Spread	Farm-Wholesale Spread	Farmer's Share of Retail Value
	(¢/doz.)	(¢)	(¢)	(¢/doz.)	(¢)	(¢)	(%)
1949	61.8	60.0	53.5	48.9	11.1	4.6	81.5
1950	56.9	55.2	48.9	43.1	12.1	5.8	78.0
1951	70.7	68.6	62.2	54.9	13.7	7.3	80.0
1952	59.0	57.3	50.7	42.9	14.4	7.8	74.9
1953	68.1	66.1	60.1	50.8	15.3	9.3	76.8
1954	55.7	54.1	48.5	39.5	14.6	9.0	73.1
1955	62.2	60.4	54.3	45.5	14.9	8.8	75.4
1956	62.1	60.3	54.0	45.1	15.2	8.9	74.7
1957	56.3	54.7	48.1	38.3	16.4	9.8	70.0
1958	57.3	55.6	49.3	39.4	16.2	9.9	70.9

[a]Adapted from price spread study of poultry and eggs in Volume III where a fuller explanation of procedure etc. is given.

Farmers sell 45% of their total egg production through the grading stations, and about 55% directly. Their share of the retail price on direct sales would be slightly higher than as shown in Table 48. On the other hand, if all grades of eggs were considered, the farmer's share would be lower than for Grade "A" Large.

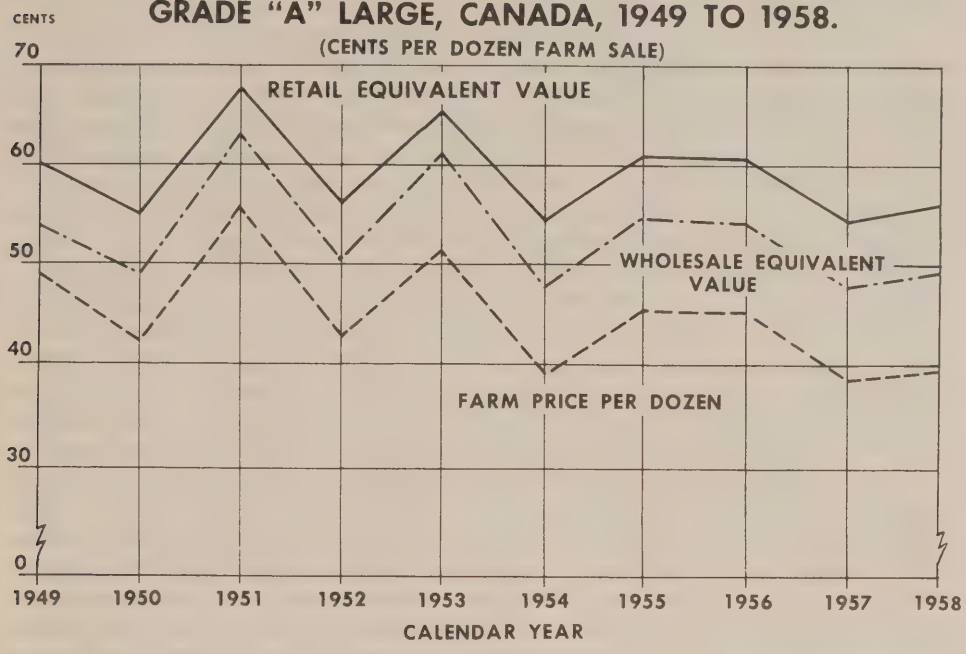
These calculations are national averages and do not show regional or local differences in prices or spreads. In our Volume III we present some regional price-spread estimates on eggs. As a general rule, retail prices are highest in the Maritimes and lowest in the Prairies. Producer prices are the lowest in the Prairies and the highest in the central provinces and the Maritimes followed closely by British Columbia. Wholesale margins are lowest in the central provinces, intermediate in the Prairies and British Columbia and highest in the Maritimes. Total farm-to-retail margins do not differ very much regionally, however, except for the Maritimes where they are substantially higher, especially since 1953. The producers in the central provinces get the highest share of the retail price for their eggs, whereas the producers in the Prairies get the lowest. The Prairies are a surplus region, and regularly supply eggs to Ontario and Quebec.

Frequent mention was made in the public hearings of the extreme seasonal fluctuations in egg prices. We have already drawn attention to this and have pointed out that the violence of these fluctuations has been slowly abating as egg production has become more even throughout the year due to larger-scale, specialized production and the stabilizing influence of price supports. The effect of price support operations and subsidies upon the spread for fresh eggs has been small.

It was suggested to us in Vancouver by the British Columbia Association of Consumers that eggs at retail should be marked "B.C. fresh" or "storage". It was claimed that this would protect the consumer and encourage the egg industry in British Columbia. We can see no completely reliable way of ensuring that fresh eggs so graded and marked remain fresh. Under warm conditions, a fresh egg can deteriorate faster in days than a properly stored egg does in weeks. A valid system of retail grading according to "fresh" and "storage" would require periodic

CHART 25

PATTERN OF FARM-WHOLESALE-RETAIL VALUES FOR EGGS, GRADE "A" LARGE, CANADA, 1949 TO 1958.



re-checking, downgrading and re-marking wherever appropriate. This seems too costly to be practical. The general problem already applies to some extent to the present system of grading. Even if the Vancouver proposal were feasible, we are not convinced that the "fresh" designation should be made on a provincial basis as was suggested.

It was suggested at our Winnipeg and Toronto hearings that eggs should be sold by weight instead of by the dozen. Considering the fragile nature of eggs and the protective packaging which this entails, and considering also that egg sizes vary so much at any time and from time to time, we can see definite difficulties in departing from selling by the dozen. But, even if these difficulties were overcome, it might not be desirable to maintain a fixed price differential according to weight or size and regardless of the general market situation, as was suggested or implied at our Winnipeg and Regina hearings. Rigid price differentials for different egg sizes or grades of eggs are probably no more realistic than fixed price differentials would be for different cuts of beef or between steers and heifers or for different grades of wheat.

It was suggested to us in Regina that grading and wholesaling charges are too inflexible, and do not take into account seasonal differences in handling costs due to variations in the volume handled. Apparently, when egg prices and costs of handling are very high, the trade exercises some restraint in its markups

but when egg prices and costs of handling are low the trade does not reduce its markups accordingly. This is a version of "charging what the traffic will bear", and seems to involve some balancing out of cost-recovery over the different marketing seasons of the year.

We believe that grading and handling costs per egg are much higher during the short season than during the flush season. The main criticism of the pricing practice referred to in the previous paragraph seems to be that it prevents low retail prices from falling still lower and thus discourages a higher volume of sales in times of large supply. The validity of this particular argument hinges on how sensitive the demand for eggs is to price changes. Our own studies suggest that this demand is not as sensitive as might generally be supposed. United States evidence tends to confirm this. A recent report there estimated that it would require, on the average, a price concession at retail of about 2.5% to increase per capita consumption by 1%.[1] The significance of this inelastic demand for eggs is that the total returns from sale of the extra-large supply would actually be less than from the sale of only the major part of the supply. In the absence of purchase by government for price support, the egg industry as a whole would actually be better off to divert the extra eggs from regular fresh egg markets into processed uses. This is what has been happening, particularly in Alberta and Manitoba.

It was pointed out to us in Toronto that since an increasing proportion of eggs is marketed directly by producers to chain stores which do their own wholesaling, the traditional sources for obtaining published wholesale price quotations are becoming less and less valid. Apparently these quotations are influential and pervasive guides in pricing eggs. We agree that under these circumstances there is a real danger of such price quotations being unrepresentative of the actual market situation and hence offering misleading information which would add unnecessary uncertainty to markets which have traditionally been unstable.

FLOUR AND BREAD[2]

Canadian flour mills produce most of the flour consumed domestically as flour or bread and, in addition, export large quantities of flour each year. A large proportion of the flour and bread is made from top quality "Manitoba Spring" wheat, produced in the Prairie Provinces. These wheats produce "hard" (high protein) flours which have excellent bread-making qualities. Over the period of study, farm cash income from the sale of wheat amounted to about 21.6% of the total farm cash income. The amount of Manitoba Spring wheat purchased by the flour milling industry was approximately 30.8% of the total amount of this wheat marketed at home and abroad.

Consumer expenditures on flour were approximately 18.8% of expenditures on all cereal products, but only half of 1% of total food expenditures. The per capita consumption of flour declined over the last decade, averaging 146 pounds

[1] Martin J. Gerra "An Econometric Model of the Egg Industry" *Journal of Farm Economics*, May, 1959, pp. 290-4.

[2] The main references in the public hearings on this subject were: Edmonton, *Proceedings*, Vol. 4, pp. 610-24 and Vol. 5, p. 676A; Winnipeg, Vol. 6, pp. 862-7; Regina, Vol. 8, pp. 1316-21; Fredericton, Vol. 10, pp. 1581-687; Toronto, Vol. 15, pp. 2454-5, 2463-86, and Vol. 17, pp. 2724-8, 2763-4; Montreal, Vol. 20, pp. 3233-46, 3257-8, 3284-5; Ottawa, Vol. 25, pp. 3933-4, 3965-8.

annually. Purchases of flour by the baking industry averaged about 53.0% of the total flour available for domestic consumption. Consumer expenditures on bread were approximately half of total expenditures on bakery products, and about 5.1% of total food expenditures. The per capita consumption of bread tended to decrease over the period, averaging 101 pounds annually.

All commercial wheat grown in western Canada is marketed through the Canadian Wheat Board which sets an initial price to the farmer and adjusts its selling prices more or less according to world market conditions. The farmer delivers his wheat to the country elevator which receives it on behalf of the Wheat Board.[1] After weighing and determining the grade and the dockage for impurities, the elevator agent issues a cheque to the farmer based on the initial Wheat Board price. The initial price is based on a Lakehead (Fort William-Port Arthur) quotation and is subject to deductions for freight and elevator handling charges between the country shipping point and the Lakehead. These handling charges cover weighing, storage and outloading from the country elevator into boxcars.

The wheat then moves in carlots, mostly eastward through the main inspection point at Winnipeg, where the grade is confirmed or established by sampling. From Winnipeg, the wheat then moves in carlots to elevators at the Lakehead where it is handled in bulk by a mechanical unloading and elevating operation. In the process, the wheat is automatically sampled again to check the grade and dockage. The "screenings" which are removed in a cleaning process are usually saleable for livestock feed. After storage, the wheat is shipped by lake vessel during the navigation season or else by boxcars to an eastern milling company's storage point or to private or government storage.

Forty-one of the 73 flour mills in Canada are located in Ontario, 28 in the Prairie Provinces, and four in Quebec. The flour mills buy wheat by grade from the Wheat Board in proportion to the mixtures to be used in the milling process. Flour milling is a highly-mechanized, complex blending operation. Flours of varying baking quality may be milled from a particular lot of wheat. The selling prices of the different grades of flour vary according to the quality. Certain non-wheat ingredients such as vitamins and chemical blending and maturing agents are added to the flour. A 60-pound bushel of wheat makes about 43.2 pounds of flour and 65.3 pounds of bread.

There are valuable by-products from the milling process called "mill feeds". Variations in prices of the mill feeds have significant influence on the profitability of the milling operation. The mill feeds may be sold directly by the flour mills to farmers as feed for livestock, they may be distributed through feed dealers, or they may be used as constituents in further processing into prepared livestock and animal feeds.

The baking industry consists of a number of chain bakeries and independent bakeries ranging down to small local establishments. Larger bakeries in eastern Canada buy their flour from the milling companies on a current requirement basis. Sometimes the flour is delivered by the milling company to large bakeries in bulk in special railway cars, but it is usually distributed by truck. The smaller

[1] See our discussion of the marketing of wheat in Part II, Chapter I, Section 1.

independents may obtain their supplies of flour from wholesalers. Some milling companies and bakeries are connected financially, as was indicated in Part II.

After the flour reaches the bakery, the processing and distributing operations are many and varied. Initially, the flour may have to be stored for a while; then the ingredients are mixed more or less mechanically; the bread is baked in the ovens and then cooled, usually sliced, and the loaves wrapped and delivered. Wages and salaries and ingredients are the largest items among baking costs, and packaging and delivery costs are also important items. Considerable selling and promotional expenses are incurred by bakeries in bread distribution, and the loss from bread going stale is significant. The stale bread is retailed at a discount or is salvaged as feed for livestock.

The bread moves from the bakeries directly to chain stores by bulk truck shipments, and is delivered in smaller lots to independent grocery stores, restaurants and other small retail establishments. Some of the larger bakeries operate depots in urban centres where bulk is broken and from which the smaller establishments are served. Bread-selling routes are served by the delivery truck system with drivers on a salary-commission handling a range of bread and cake products. The delivery man is the bakery firm's main link with the customer. In the case of wholesale sales to retail stores, the delivery man not only sells but arranges for display space and gives advice on other selling details. The proportion of bakery sales made at wholesale has been increasing.

Wheat and flour prices in general moved downward during the last decade. This took place in spite of the additional cost incurred by the enrichment of flour since 1953. Millfeed sales partially offset the costs of milling flour and can cushion the effects of falling flour prices. The selling price of millfeeds moved upwards from 1949 to 1952, and downwards thereafter. The volume of hard wheat flour and millfeeds sold declined between 1952 and 1957, but increased in 1958.

Unused capacity results in higher costs per barrel of flour produced than if mills are operating at near-capacity. Over the period 1949 to 1957, flour production varied from about 62% to 76% of capacity, averaging 70%. Capital, repairs and maintenance expenditures, per barrel of flour produced varied considerably from year to year, but salaries and wages increased continuously after 1950, except for 1956. Increasing mechanization and automation, keen market competition, and product diversification may explain why there has not been more upward pressure on flour prices, particularly from increasing wage and salary costs. It would seem that if flour production is to move significantly towards capacity, much depends on increasing exports. As far as the domestic market goes, the increase in population is almost offset by the decline in per capita consumption. In an effort to assure themselves of a domestic market for their flour, some larger flour mills have invested heavily in the baking industry. The per capita consumption of bread also is declining although total bread sales by bakeries are increasing.

The Farm-Lakehead-Mill-Wholesale-Retail Spreads on Wheat Flour

Our calculations of the farm-Lakehead-mill-wholesale-retail spreads on wheat flour are summarized in Table 49 and shown in Chart 26. The farm value of wheat was based on the domestic price of one bushel of No. 2 Northern, in store at the Lakehead. By-product values and marketing costs from the country ele-

vator to Lakehead storage, such as storage, insurance, freight and handling charges and Wheat Board expenses, were deducted to derive the farm value. The retail price of flour is a weighted average price for "all purpose" white flour which is mostly No. 1 Patent. The milling and wholesale prices are for No. 1 Patent flour. The wholesale price is for Toronto and Montreal.

Wheat and flour prices declined over the period at all levels except wholesale and retail. Retail prices increased each year except for 1955. Wholesale prices advanced to 1953 and declined thereafter, but remained above the 1949 level. The overall spread widened rapidly from 1949 to 1954, decreased slightly in 1955, and increased thereafter.

Marketing charges for wheat as far as the Lakehead increased up to 1953 and then declined to 1949 levels. By-product values increased to 1951 and then declined well below the 1949 figure.

The milling spread and the miller's share of the retail value increased over the decade as a whole. At least part of the widening of the miller's spread can be explained by the increased amount of consumer-size packaging performed. The retailer spread increased also, and the wholesaler spread more than doubled. Wholesalers do not handle much flour any more compared with the chain stores who do their own wholesaling and so it is more meaningful to say that the combined wholesale-retail spread has widened substantially.

CHART 26

PATTERN OF FARM-LAKEHEAD-MILL-WHOLESALE-RETAIL VALUES FOR WHEAT-INTO-FLOUR, CANADA, 1949 TO 1958.

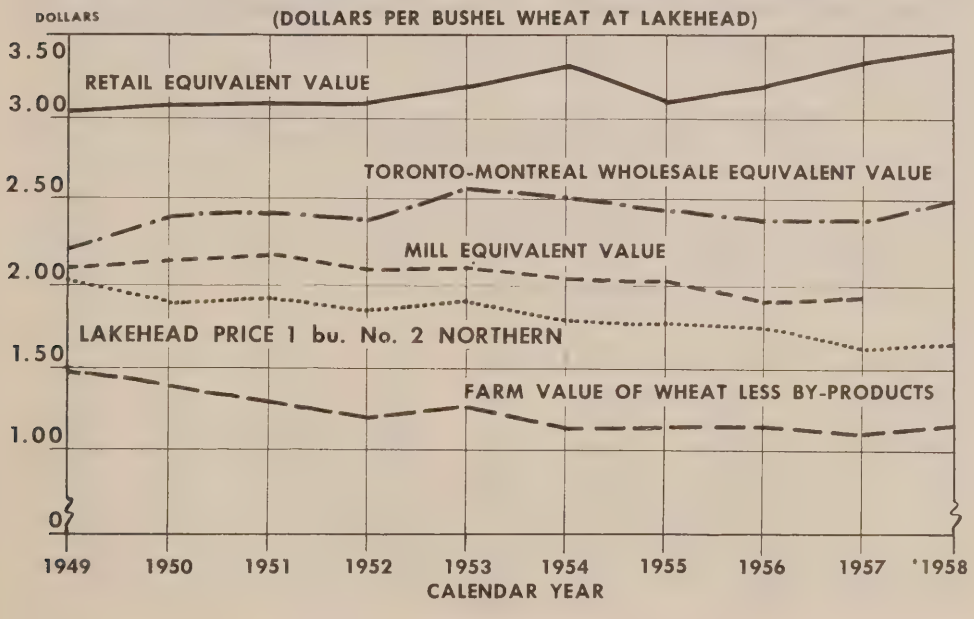


Table 49—Summary of Farm-Lakehead-Mill-Wholesale-Retail Spreads on Wheat-into-Flour, Canada, 1949 to 1958[a]

Calendar Year	Retail Price Flour	Retail Equivalent Value of 1 bu. Wheat	Toronto-Montreal Wholesale Equivalent Value of 1 bu. Wheat	Milling Equivalent Value of 1 bu. Wheat	Lakehead Price No. 2 Northern	Farm Price of Wheat	Farm Value of Wheat less By-Products	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/lb.)	($)	($)	($)	($/bu.)	($/bu.)	($)	($)	(%)
1949	7.2	3.06	2.23	2.12	2.02	1.78	1.50	1.56	49.0
1950	7.3	3.10	2.41	2.14	1.87	1.71	1.41	1.69	45.5
1951	7.4	3.14	2.48	2.17	1.91	1.64	1.33	1.81	42.4
1952	7.4	3.14	2.41	2.12	1.80	1.53	1.23	1.91	39.2
1953	7.6	3.23	2.59	2.12	1.89	1.57	1.31	1.92	40.6
1954	7.7	3.27	2.51	2.04	1.71	1.40	1.15	2.12	35.2
1955	7.4	3.14	2.49	2.02	1.71	1.45	1.20	1.94	38.2
1956	7.6	3.23	2.47	1.88	1.70	1.45	1.21	2.02	37.5
1957	7.9	3.36	2.47	1.92	1.60	1.37	1.15	2.21	34.2
1958	8.0	3.40	2.50	n.a.[b]	1.62	1.39	1.19	2.21	35.0

[a]Adapted from price spread study of flour and bread in Volume III where a fuller explanation of procedure etc. is given.
[b]Not yet available.

The Farm-Flour Mill-Wholesale-Retail Spreads on Bread

During the period of study, the bread-baking industry purchased from 49.7% to 54.8% of the total wheat flour available for domestic consumption. Bread production by the baking industry increased from 1949 to 1953, decreased slightly in 1954, and increased thereafter.

The cost of flour per pound of bread decreased slightly over the period 1949 to 1957. The cost of other ingredients varied over the period, but reached its highest level at the end of the period. The price of bread increased by about 45.0% during the last decade.

Table 50—Summary of Farm-Flour Mill-Wholesale-Retail Spreads on Wheat into Bread, Canada, 1949 to 1958[a]

Calendar Year	Retail Price Bread	Retail Equivalent Value of 1 bu. Wheat	Wholesale Equivalent Value of 1 bu. Wheat	Flour Mill Equivalent Value of 1 bu. Wheat	Farm Value of Wheat as Flour	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/lb.)	($)	($)	($)	($/bu.)	($)	(%)
1949	10.0	6.53	5.55	1.95	1.50	5.03	23.0
1950	10.3	6.73	5.94	1.98	1.41	5.32	21.0
1951	11.4	7.44	6.66	1.95	1.33	6.11	17.9
1952	11.8	7.71	6.79	1.89	1.23	6.48	16.0
1953	12.0	7.84	7.05	1.85	1.31	6.53	16.7
1954	12.5	8.16	7.25	1.84	1.15	7.01	14.1
1955	12.5	8.16	7.12	1.78	1.19	6.97	14.6
1956	13.3	8.68	7.44	1.77	1.21	7.47	13.9
1957	14.1	9.21	8.03	1.79	1.15	8.06	12.5
1958	14.5	9.47	8.16	n.a.[b]	1.19	8.28	12.6

[a]Adapted from price spread study of bread in Volume III where a fuller explanation of procedure etc. is given.
[b]Not yet available.

Our calculations of the farm-flour mill-wholesale-retail spreads on bread are summarized in Table 50 and shown in Chart 27.

The farm prices of wheat used for the flour price spread calculations were also used in estimating the price spread on bread. The mill price is for No. 2 Patent flour, which is the grade usually bought by the bread bakeries. The wholesale price of bread is an average for Canada. The retail price is an average price for plain white bread for Canada.

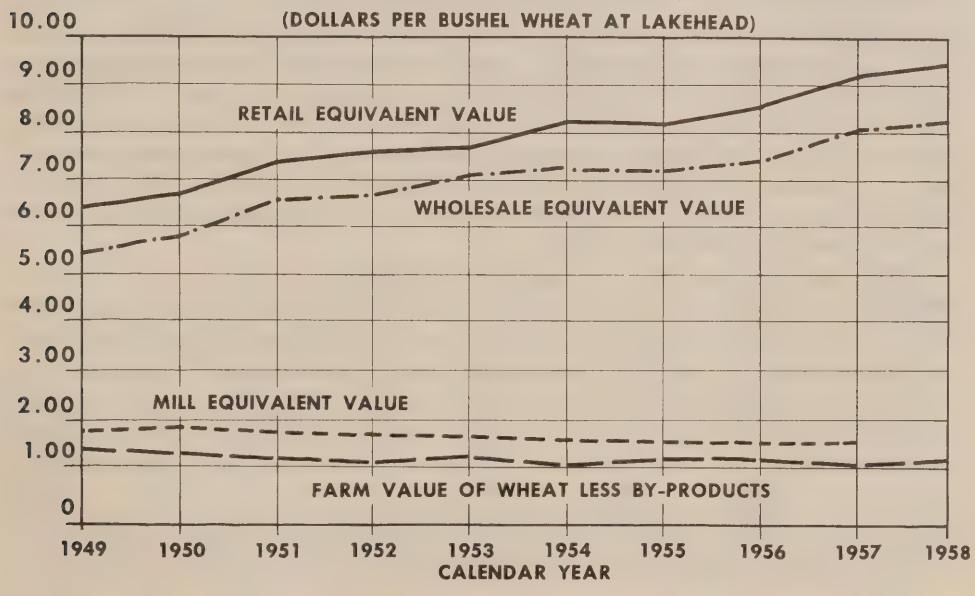
Farm and flour mill prices declined over the decade of study, but wholesale and retail prices increased prominently. The combined result was an increase of about 64.5% in the farm-retail spread on bread. It is clear from Table 50 and Chart 27 that the increase took place between the sale of the flour from the mills and the sale to the consumer at retail, which includes bread baking (processing and wholesaling) and retailing. Of these the bakery-wholesale margin increased the fastest.

The farmer's share of the retail price dropped from 23.0% in 1949 to 12.5% in 1957. The retailer's share increased slightly over the period as a whole, and there was a substantial increase in the bakery-wholesale share from 55.1% in 1949 to 67.8% in 1957.

Out of a 20-ounce loaf of sliced white bread which cost 17.6¢ on the average at retail in 1957 the farmer received 2.2¢ for the wheat going into it, the wheat handling, etc. costs to the Lakehead accounted for 0.9¢, the flour miller received 0.4¢, the bread bakery-wholesaler received 11.9¢, and the retailer received 2.3¢.

CHART 27

PATTERN OF FARM-FLOUR MILL-WHOLESALE-RETAIL VALUES FOR WHEAT-INTO-BREAD, CANADA, 1949 TO 1958.



Some large bakeries sell bread to chain stores under both chain brands and highly advertised bakery brands. The chain brands then retail at 2¢ to 4¢ a loaf less than either the bakery brand or house delivery.

The main reason for the widening of the farm-retail spread on bread was higher bakery costs, prominent among which were labour, packaging, promotional and delivery expenses. The Ontario Federation of Labour informed us at the Toronto hearings that wages in the bakery industry apparently increased faster than productivity during our period of study, but that this still left the wage level below average for the manufacturing sector. We were told in Fredericton and Montreal that although bread wrapping has not changed much it has improved during our period. We were also told that the loaves are baked softer, and this requires stronger packaging for protection of the wrapped loaves in delivery. An increased variety of breads with small volume sales, and longer delivery routes may also have contributed to the increased bakery spread. Another possible explanation of part of the increased spread is improved bread quality. We were told that the baking formula has been improved by adding more milk, butter and sugar—ingredients which are more expensive than flour.

POTATOES[1]

Potatoes are an important vegetable to both producers and consumers. Over the last decade, cash farm income from the sale of potatoes amounted to about 39.1% of cash farm income from all vegetables and 1.5% of total cash income from farm products. Consumer expenditures on potatoes accounted for about 27.1% of expenditures on all fresh vegetables and 1.7% of total expenditures on food. The annual per capita consumption of fresh potatoes declined over the decade; during 1953 to 1957, it averaged about 150 pounds.

Potatoes are highly perishable unless handled with care and stored at about 38°F. The expenses of assembling, storing, wholesaling and retailing potatoes make up the major costs in marketing. In general, preparation is limited to washing, grading and packaging the potatoes for fresh sale, although during the decade of study an increasing quantity of potatoes was processed further into prepared, precooked and packaged forms. New ways of handling fresh potatoes such as consumer-size packaging done either at country shipping points or terminal markets, have also been developed.

Although potatoes may be grown almost anywhere, there are fairly well-defined commercial producing areas in each province. Prince Edward Island and the St. John River valley in New Brunswick are the major surplus producing areas in Canada, and it is from there that Quebec and Ontario obtain the bulk of their extra supplies for supplementing local production. Seasonally, the earliest producing areas are southwestern Ontario and coastal areas of British Columbia. Both of these areas make substantial shipments to eastern Canada and the Prairies respec-

[1] The main references in our public hearings to this subject were: Vancouver, *Proceedings*, Vol. 1, pp. 50-1, 132-5, Vol. 2, pp. 279-80 and Vol. 3, pp. 332-99; Winnipeg, Vol. 7, pp. 1041, 1049; Charlottetown, Vol. 11, pp. 1901-30; Halifax, Vol. 13, pp. 2156-7; Toronto, Vol. 15, pp. 2433-4; Montreal, Vol. 21B, pp. 3533-48.

tively until the local crops are harvested. Generally speaking, farm prices during the last decade tended to be higher in major deficit regions like Ontario, Alberta and Saskatchewan than in the major surplus region of the Maritimes.

The storage of potatoes usually takes place at shipping points. Producers having adequate storage space may hold potatoes for periods varying from a few weeks after harvest to eight or nine months depending on the weather, the type of storage and the market outlook, both domestic and United States. The decision is flexible and more or less speculative. The price of potatoes, particularly at the farm level, is highly variable, being quite sensitive to changes in market supply and outlook. For example, the 1951 crop was 27% smaller than in 1950; by mid-October of 1951, wholesale prices of New Brunswick potatoes in Montreal had doubled their 1950 price.

Normally the season of heaviest domestic marketings is autumn after the harvest, especially the months of October and November, but there is a secondary peak in April. Marketings tend to decrease to February, rise to April and then fall to a minimum in June and July. October is the month of lowest prices. Prices rise through the winter, taper off in March, April and May and then rise to a peak in July. Prices at the different levels tend to move up or down together from month to month. Generally speaking, when prices are highest seasonally, the farmer's share of the retail price is highest. The season of lowest farm shares includes the months of November through February.

The results of our calculations of the farm-wholesale-retail price spreads on fresh potatoes are summarized in Table 51 and shown in Chart 28. An allowance was made for waste, shrinkage, etc. of 7%, attributing most of it statistically to the marketing stages prior to retail. The retail and wholesale prices are for No. 1 grade white table potatoes; the farm price is for all sales. Monthly farm, wholesale and retail prices were weighted by domestic unloads to derive weighted crop-year prices. The crop-year was taken as August 1 to July 31.

The farm-retail spread widened over the period as a whole. The widening took place in both the farm-wholesale and retail components of the farm-retail spread. This is visible in Chart 28. Table 51 and Chart 28 also show how in the

Table 51—Summary of Farm-Wholesale-Retail Spreads on Potatoes Canada, Crop Years 1949/50 to 1957/58[a]

Crop Year	Retail Price	Retail Value Equivalent of 100 lb. Farm Sale	Wholesale Value Equivalent of 100 lb. Farm Sale	Farm Price	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/10 lb.)	($)	($)	($/100 lb.)	($)	(%)
1949/50	34.9	3.24	1.87	1.53	1.71	47.2
1950/51	29.7	2.76	1.59	1.30	1.46	47.1
1951/52	58.5	5.44	4.28	3.67	1.77	67.5
1952/53	51.2	4.76	2.95	2.75	2.01	57.8
1953/54	31.2	2.90	1.62	1.25	1.65	43.1
1954/55	49.4	4.59	3.00	2.52	2.07	54.9
1955/56	43.0	4.00	2.45	1.80	2.20	45.0
1956/57	44.0	4.09	2.60	1.93	2.16	47.2
1957/58	45.3	4.21	2.69	1.75	2.46	41.6

[a]Adapted from price spread study of potatoes in Volume III where a fuller explanation of procedure etc. is given.

short crop year 1951/52 potato prices soared at all levels, particularly at the farm. The farmer's share rose in that year to about 68% from 47% in the previous two years. By 1953/54, however, the farmer's share had dropped to 43%. In 1956/57 the farmer's share was back at 47%, where it had been at the beginning of the period. Over the period as a whole, the farmer's share amounted to about 51%.

The combined transporter-wholesaler share (or transporter-broker-wholesaler share) amounted to about 11.5% of the retail price over the period as a whole. This combined share narrowed while the farmer's share widened in the early years of the period, however, and then the share widened as the farmer's share contracted to its initial size. Brokerage was 2 and $\frac{2}{3}$¢ to 4¢ per 100 pounds, which would amount to a share of about $\frac{3}{4}$ of 1% of the retail price.

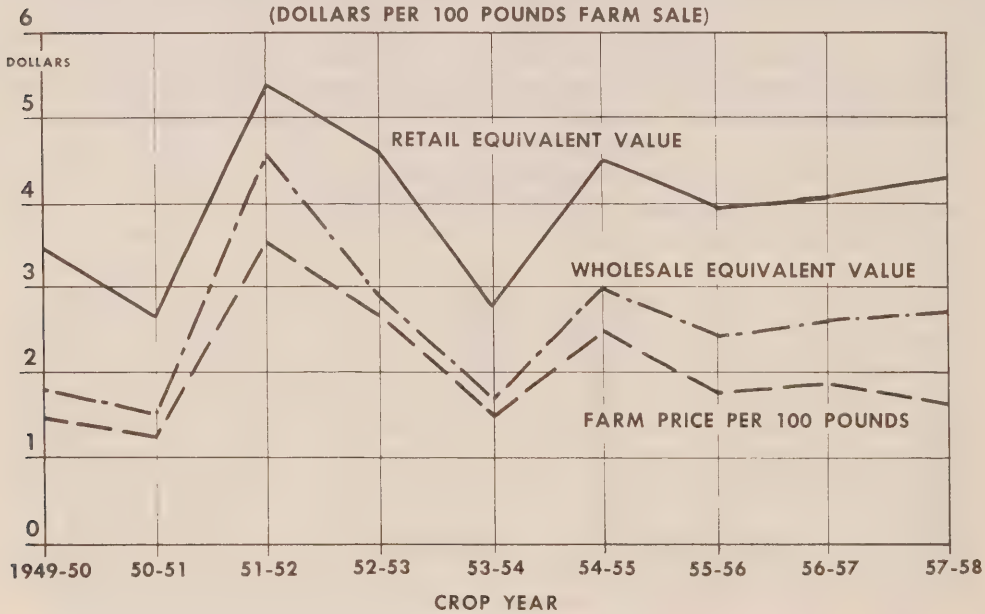
The retailer's share averaged about 37.5% of the retail price over the period as a whole, with no definite upward or downward trend discernible. The retailer's share was more stable than either the farmer's or wholesaler's share.

The reasons for the widening of the farm-retail spread appear to have been higher labour and material costs of packaging, higher transportation costs and constant per cent markups at wholesale and retail on a rising farm price.

The foregoing estimates are, of course, national averages, and are subject to almost unlimited variations from place to place and time to time. A few of these particular situations were brought to the attention of the Commission during its public hearings.

CHART 28

PATTERN OF FARM-WHOLESALE-RETAIL VALUES FOR POTATOES, CANADA, CROP YEARS 1949-50 TO 1957-58.



In Winnipeg, the Commission was informed by the provincial representative of the Canadian Association of Consumers of a situation in which New Brunswick potatoes had undersold Manitoba potatoes in Winnipeg, in spite of the long freight haul from New Brunswick. This situation was not claimed to be a chronic state of affairs. Our investigations show that farm prices for potatoes in New Brunswick average 40 to 50 cents lower per 100 pounds than in Manitoba. Since the difference would sometimes considerably exceed this average following a heavy crop, it could explain, in large part, why New Brunswick potatoes sometimes undersell Manitoba potatoes in Winnipeg. Another possibility, which we were unable to investigate, is that Winnipeg consumers have a price preference for Manitoba potatoes.

In Charlottetown, representatives of the producer and consumer co-operatives explained to us that Prince Edward Island potato producers and shippers have always had to contend with drastic price fluctuations on table stock. We were told that these price changes bear no proper relationship to shifts in supply and demand, but are caused rather by speculative buying in Montreal and Toronto, which in turn is tied to daily fluctuations in potato futures on the New York Mercantile Exchange. It was said that shippers of Prince Edward Island potatoes usually have to wait until 11:00 a.m. (when opening prices on the New York Mercantile Exchange become known) before receiving firm offers from Montreal and Toronto dealers.

The Commission noted that shipments of potatoes out of Prince Edward Island to Toronto sometimes fluctuate considerably from week to week. The testimony was not clear as to whether total Prince Edward Island marketings also fluctuate a lot from week to week, but apparently, there are sizeable variations in the volume of marketings from time to time. The variations are not entirely in response to price changes, but are also affected by weather and seasonal transportation difficulties in the Island and by interruptions in shipping to the mainland. We have also noted that the producers themselves sometimes speculate by holding on to their potatoes in the hope of selling later at a higher price. Other people, such as the shippers, speculate by moving potatoes into and out of storage, depending on market prospects.

Once the potatoes have reached advance distribution points, a temporary oversupply could result in a sharp fall in price for two important reasons—the perishability of the product and the inelastic demand for it. Even a sharp fall in price to clear the market does not result in a substantial increase in rates of consumption. On the other hand, because of the inelastic demand, a temporary shortage of supply (perhaps because of weather conditions or misjudgment in the trade) could cause a sharp rise in price because rising potato prices do not result in a substantial decrease in consumption.

We are prepared to believe that operations on the New York Mercantile Exchange can influence Canadian potato prices. The nature of the influence may sometimes be to aggravate price fluctuations, but we are not convinced that this must always be the result. Speculative buying when potato prices are low, for the purpose of selling later when prices are high, should, if the predictions turn out to be correct, raise the low price and later lower the high price. Similarly, the buying of potatoes in one region where market prices are low, for shipment to other markets where prices are high, should reduce the interregional differences in prices, after allowing for freight, tariffs etc.

At our Montreal hearings, we were told that chain stores take a high retail markup on fresh fruits and vegetables like potatoes in order to compensate for their special sales on certain other items (so-called "leaders"). We were also told in Montreal that bargains on potatoes advertised by chain stores applied only to large packages such as the 75-pound bag which is inconveniently heavy and bulky and hence unpopular, while at the same time and for the same potatoes the chain store prices on handy 10-pound packs remained high—higher than charged by independent retailers. The general inference which we draw from both of these claims is that the chain retailer has considerable flexibility in pricing fresh fruits and vegetables. Also, it is apparent that consumers need to read food advertisements carefully.

TOMATOES[1]

Among fruits and vegetables tomatoes are the most important farm product used in processing. During the period 1949 to 1957 between 365 million pounds (in 1950) and 697 million pounds (in 1952) of field tomatoes were processed annually. Farm cash income for tomatoes delivered for processing ranged from $5.9 million in 1950 to $14.2 million in 1952. Over the period as a whole, farm cash income from tomatoes for processing accounted for 9.0% of cash income from all vegetables, and 0.3% of total cash income from farm products.

Tomatoes (fresh, canned and juice) accounted for about 20.0% of the expenditure on all vegetables by consumers. The annual per capita consumption of all forms of tomatoes varied from year to year depending on the crop, but in general it was close to 60 pounds on a fresh equivalent basis. The per capita consumption of tomato juice, paste and puree increased fairly steadily.

Field tomatoes are a highly perishable crop and they must, therefore, be delivered quickly to the processing plant or to the ultimate consumer. Up to 70% of all fresh tomatoes are shipped by truck and the remainder by rail. They must be placed in appropriate shipping containers and handled with care to avoid brusing, crushing and other damages which lower the grade, increase the waste and lower the price. Packing or packaging materials, labour, waste and spoilage are the main cost items in marketing tomatoes. Baskets, boxes and crates are usually used up to the wholesale level, but the tomatoes are normally retailed in window-cartons or trays.

There are two main groups of tomato varieties, one used for the fresh market and the other used for processing. Tomatoes are sold in a greater number of forms than any other vegetable: fresh and canned tomatoes, tomato juice, catsup, soups, pulp, puree, paste and sauce. As with other canned and frozen vegetables and fruits, the registered establishments processing tomatoes are frequently inspected by a Canada Department of Agriculture inspector, and the canned tomatoes are sampled for grade verification.

The production of field tomatoes changes considerably from year to year. These variations are caused by weather conditions and changes in planted acreage.

[1] The main references in our public hearings to fresh and canned tomatoes were: Vancouver, *Proceedings*, Vol. 2, pp. 280-1; Winnipeg, Vol. 6, pp. 860-2 and Vol. 7, p. 1044; Toronto, Vol. 15, pp. 2432-3.

Since close to 80% of the field tomatoes are used for processing, the primary influence on any change in crop production is exerted by the processor who usually decides in advance what quantities he will need and signs contracts with the growers accordingly. Tomato exports are far outweighed by imports. Imported tomatoes are shipped into Canada all year round. During the summer months the shipments are slightly smaller, because at that time larger quantities of domestic tomatoes enter the market.

Field tomatoes are grown in many regions of Canada, but the bulk of the commercial crop comes from Ontario (about 80%), Quebec (about 15%) and British Columbia (about 5%). Ontario has favourable soil and climatic conditions and large markets. Although tomato growing is usually a sideline, in Essex and Kent counties of Ontario it is an important cash crop. Ontario growers sell to the processors up to 85% of their production, British Columbia 80%, and Quebec 65%. The rest of the crop is sold on the fresh market. Fresh Ontario tomatoes usually find their market within the province with some quantities shipped to Quebec and the Maritimes. British Columbia retains up to 60% of the crop and sells the rest to the Prairies. Quebec fresh tomatoes are almost exclusively used inside the province with very small quantities being shipped to Ottawa. In Ontario and British Columbia, minimum prices are established annually by negotiation between producer marketing boards and the processors.

Farm prices of tomatoes used for processing and the quantities produced show large variations from year to year. Farm prices seem to depend to a greater extent upon the availability of the stocks of processed tomato products at the beginning of the season and on the price of imported field tomatoes and tomato products than upon domestic tomato production. For example, in 1952 when the crop was the highest during the decade 1949 to 1958, farm prices were also the highest whereas the stock of tomato products in that year was the lowest of the decade. The year-to-year variations in retail prices of canned tomatoes have also been caused more by the availability of stocks than by the size of the crop.

Large seasonal variations in wholesale and retail prices exist only for fresh tomatoes. In July, when the new crop of tomatoes enters the market, there is a sharp drop in fresh tomato prices. The prices for canned tomatoes maintain much greater stability throughout the year.

There has been a marked difference in the trends of retail prices for fresh and canned tomatoes in major Canadian cities. Between 1952 and 1958 retail prices for fresh tomatoes increased by about 50% in Vancouver, 40% in Toronto and Montreal and 25% in Winnipeg and Halifax. For the same period retail prices for canned tomatoes showed a decrease in all cities mentioned, ranging from about 2% to 12%. The biggest decline in prices occurred in Montreal and the smallest in Halifax.

Canned tomatoes are the only tomato product for which systematic data on both farm and retail prices are available for measuring the farm-retail spread and the farmer's share of the retail price. The results of our calculations of the farm-processor-retail spread on canned tomatoes for the period 1949 to 1957 are summarized in Table 52 and shown in Chart 29. These calculations are based on retail prices for "Choice" quality, and farm and processor prices for all grades and varieties of tomatoes. In view of this, the farmer's share is to

some extent on the low side. We should also keep in mind that all these figures are national averages and cannot be applied with equal validity to all regions or localities.

There have been wide fluctuations in retail and processor prices over the decade. Retail prices seem to follow a cyclical pattern of about four years' duration; farm prices have shown relatively smaller fluctuations. The farm-retail spread for canned tomatoes is much more variable than for other canned vegetables. Between 1950 and 1952 it increased from $94 per ton to $159 per ton, and then decreased sharply for the next two years. Since 1954 there has been a more regular pattern in prices, spreads and the farmer's share. Over our period of study as a whole, processor and retail prices increased, and also, but to a lesser extent, farm prices. The farmer's share increased from 20.0% in 1949 to 23.3% in 1954, but then declined to 18.3% in 1957. The spread widened mainly because of increased processing costs. In addition, canned tomatoes were imported from the United States in increasing quantities over the decade, and the spread was widest in the years of heavy imports.

The Canadian Association of Consumers suggested to us at our Ottawa hearings that, in canning fruits and vegetables, there should be a shift to larger cans of 20 and 28 ounces. The can size was reduced during wartime as an economy measure. The Canadian Association of Consumers pointed out that a larger can would be more economical for the larger families of today. We are inclined to agree, but wonder just how widespread is the demand for larger cans.

CHART 29

PATTERN OF FARM-PROCESSOR-RETAIL VALUES FOR CANNED TOMATOES, CANADA, 1949 TO 1957.

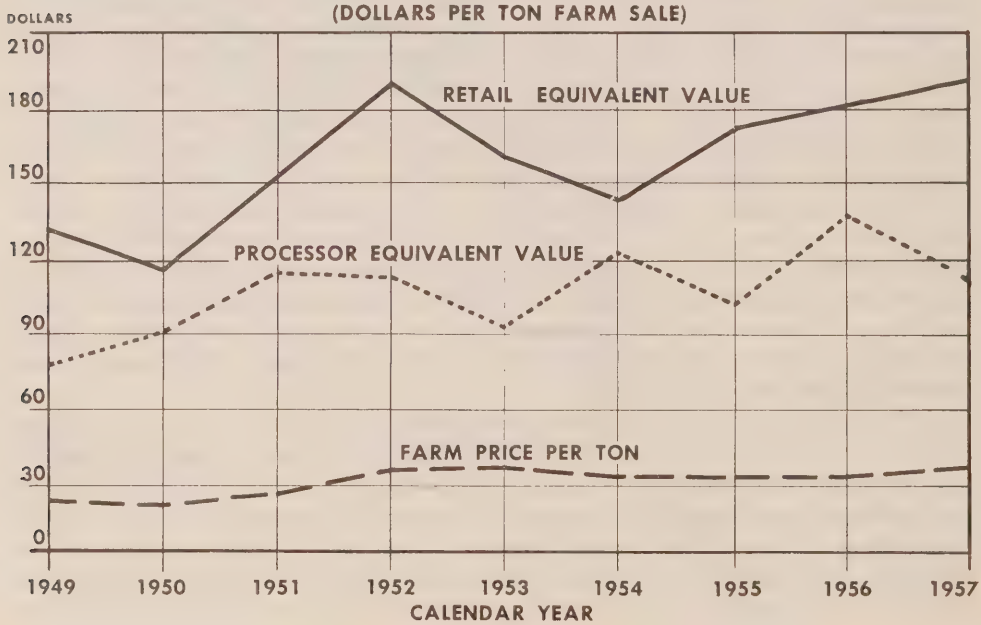


Table 52—Summary of Farm-Processor-Retail Spreads on Canned Tomatoes, Canada, 1949 to 1957[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 Ton Fresh	Processor Selling Value Equivalent of 1 Ton Fresh	Farm Price Calendar Year Basis	Farm-Retail Spread	Processor's Share of Retail Value	Farmer's Share of Retail Value
	(¢/28-oz. tin)	($)	($)	($/ton)	($)	(%)	(%)
1949	20.1	135	81	27	108	39.7	20.0
1950	17.7	119	92	25	94	56.1	21.3
1951	23.1	155	118	29	126	57.4	18.5
1952	28.8	194	117	35	159	42.2	18.2
1953	24.4	164	93	36	128	34.7	22.1
1954	21.5	145	122	34	111	61.0	23.3
1955	26.3	177	113	34	143	44.5	19.3
1956	27.3	184	140	34	150	57.4	18.6
1957	29.1	196	117	36	160	41.7	18.3

[a] Adapted from price spread study of tomatoes in Volume III where a fuller explanation of procedure etc. is given.

PEAS[1]

About 93.2% of the green peas grown during the period of study were canned. Among canned vegetables, peas were exceeded in value only by tomatoes. The weight of green peas canned during the last decade accounted for about 22.5% of the total for all canned vegetables. Among frozen vegetables, peas accounted for about 60.0% of the total weight. Cash farm income from the sale of peas for processing amounted to about 4.5% of cash income from all vegetables and 0.2% of total cash income from farm products. Consumer expenditures on canned peas amounted to 21.5% of expenditures on all canned and dried vegetables and 0.6% of total expenditures on food. The per capita consumption of canned peas increased slightly from an average of 6.9 pounds during the period 1949 to 1952 to an average of 7.2 pounds during the period 1954 to 1957. The per capita consumption of frozen vegetables, of which peas make up the major part, increased from an average of 0.9 pounds during the period 1949 to 1952 to an average of 2.3 pounds during the period 1954 to 1957.

The yield and quality of peas vary greatly with weather conditions. A cool growing season with frequent rainfall is favourable to the increased production of tender, sweet peas of good colour. Peas for processing are purchased on the basis of a "tenderometer" reading (a tenderometer is an instrument which measures the firmness of the skin). Since quality deteriorates rapidly with advancing maturity, it is important to harvest and process ripe peas rapidly. If harvested too early, the quality is good but the yield is light; if harvested too late, the quality is poor but the yield is heavy. The pea yield varies considerably from year to year, but over the decade 1948 to 1957 it averaged 2,100 pounds per acre.

[1] The main references in our public hearings to canned and frozen peas were: Winnipeg, *Proceedings,* Vol. 6, pp. 860-2, 885; Toronto, Vol. 15, pp. 2432-3 and Vol. 18, p. 2861.

Other factors also affect growing and processing costs. The quality of peas continues to deteriorate after shelling unless the peas are processed promptly. By planting early and late varieties, however, the harvesting and packing season is extended. Small, specialized vegetable packing plants may operate only a month or two out of the year. Larger, more versatile packing plants may operate three months or more. Even when operating, the packing plants may not operate steadily at or close to capacity—it depends a lot on harvest weather conditions.

The peas from the field are shelled in a vining machine close by, and then transported to the processing plant where they pass mechanically, and to a large extent automatically, through the packing operations of cleaning, sizing, blanching, grading, filling of cans, sterilizing and cooling, labelling, casing, storing and distribution.

Peas canned in registered establishments are examined by a Canada Department of Agriculture inspector. The canned peas are graded into Canada "Fancy", "Choice" and "Standard". Each of these grades is usually subdivided into five sizes of pea from No. 1, the smallest, to No. 5, the largest, but they may also be canned unsized.

The leading provinces in the production of peas for processing are Ontario, Quebec and British Columbia, but peas for processing are also grown in the Prairie and Maritime Provinces. Over the decade of study, Ontario, Quebec and British Columbia accounted for 84.2% of the total contracted acreage. It is the usual practice for the processors to contract with the growers in advance of planting for specified acreages of peas at a negotiated minimum price. Yearly variations in total contracted acreages are closely associated with stocks of canned peas on hand in relation to the stocks of a year before and to the increasing population. There is, therefore, very ltitle seasonal variation in prices at the farm, processor or retail levels.

Over the period of study, imports of canned peas exceeded exports, but not conspicuously. Neither imports nor exports over the period accounted for much more than 1% of stocks.

Table 53—Summary of Farm-Processor-Retail Spreads on Canned Peas, Canada, 1949 to 1957[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 Ton Farm Sale	Processor Equivalent Value of 1 Ton Farm Sale	Farm Price Calendar Year Basis	Farm-Retail Spread	Processor's Share of Retail Value	Farmer's Share of Retail Value
	(¢/20-oz. can)	($)	($)	($/ton)	($)	(%)	(%)
1949	17.6	405	316	78	327	58.8	19.3
1950	17.4	400	328	74	326	63.5	18.5
1951	18.8	432	376	86	346	67.1	19.9
1952	20.6	474	394	98	376	62.4	20.7
1953	21.1	485	394	96	389	61.4	19.8
1954	20.9	480	376	96	384	58.3	20.0
1955	20.7	476	348	96	380	52.9	20.2
1956	20.2	464	362	98	366	56.9	21.1
1957	20.6	474	364	96	378	56.5	20.3

[a] Adapted from price spread study of peas in Volume III where a fuller explanation of procedure etc. is given.

Price Spread on Canned Peas

Our estimates of the farm-processor-retail spreads on canned peas for the period of study are summarized in Table 53 and shown in Chart 30. The calculation is made on the basis of one ton of peas sold by the farmer for processing.

Retail prices increased between 1949 and 1953, and then declined, except for 1957. Processor selling prices in general followed the same pattern. Farm prices increased rapidly from 1949 to 1952, and then weakened a little. The farm-retail spread increased between 1949 and 1953 and then narrowed to 1956. The spread widened again in 1957. The increase in the spread was moderate over the period as a whole.

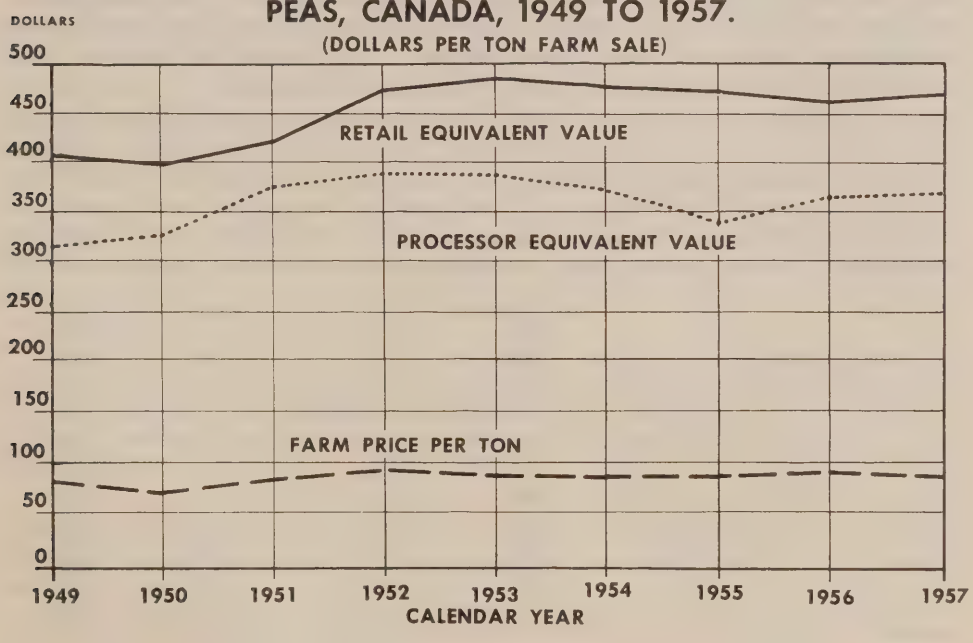
The farmer's share of the retail price shows a slight upward trend over the period, from 19.3% in 1949 to 20.3% in 1957. The processor's share of the retail value varied considerably, but averaged 59.6% over the period as a whole.

Price Spread on Frozen Peas

Over the period of study, frozen peas accounted for an increasing proportion of the total weight of frozen vegetables—50.6% in 1949 and 66.3% in 1957. The value of sales of frozen peas exceeds that of any other frozen vegetable. They are also used in the production of soups, baby foods, frozen mixed vegetables and prepared frozen foods.

CHART 30

PATTERN OF FARM-PROCESSOR-RETAIL VALUES FOR CANNED PEAS, CANADA, 1949 TO 1957.



Frozen peas retain much of the fresh flavour and colour of fresh green peas. Peas for freezing are usually packaged by machine. Packaging is a costly item because of special requirements—a satisfactory package must be attractive, protect against contamination, have low moisture transmission, and tend to exclude air.

Many of the plants which process frozen peas and other vegetables prepare the package in one plant and do the freezing in another. The distance between the plants is sometimes considerable and may have an adverse effect on quality. With an expanding market, packing and freezing units will probably become more closely integrated.

The main producing areas of frozen vegetables are British Columbia, Ontario, Alberta and Quebec. British Columbia and Alberta are a long and expensive haul by refrigerated transport to the larger markets in Ontario and Quebec. A shortage of freezer storage and cabinet space in retail outlets has limited sales and has required frequent deliveries. Supermarkets presently provide a large and increasing part of freezer cabinet space.

Separate figures are not available on imports and exports of frozen peas, but it is known that imports have increased rapidly over the period of study and that exports have remained small. Most of the imports came from the United States.

Our estimates of the farm-retail spreads on frozen peas are summarized in Table 54. The calculation is made on the basis of one ton of peas sold by the farmer for processing. The same farm price had to be assumed as for canned peas, and this may underestimate the farm price and the farmer's share and overestimate the farm-retail spread. The validity of our general conclusions would not be impaired, however.

The retail price for frozen peas declined from 31.5¢ for a 12-ounce package in 1952 to 23.8¢ in 1957. The farm price also declined, but more slowly from $98 per ton in 1952 to $94 per ton in 1957. Concurrently, the farm-retail spread declined, and the farmer's share increased from 13.1% of the retail value in 1952 to 16.6% in 1957, averaging 15.0% over the period as a whole.

The marked decline in retail prices of frozen peas, in spite of the increase in per capita consumption, is all the more conspicuous in contrast with the increase in retail prices of canned peas. There seem to have been three main

Table 54—Summary of Farm-Retail Spreads on Frozen Peas, Canada, 1952 to 1957[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 ton Farm Sale	Farm Price Calendar Year Basis	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/12-oz. pkg.)	($)	($/ton)	($)	(%)
1952	31.5	747	98	649	13.1
1953	30.8	731	96	635	13.1
1954	27.6	655	96	559	14.7
1955	25.6	607	98	509	16.1
1956	25.2	598	96	502	16.1
1957	23.8	565	94	471	16.6

[a] Adapted from price spread study of peas in Volume III where a fuller explanation of procedure etc. is given.

reasons for the declining prices of frozen peas: (1) increased production and production in new areas, and imports; (2) better distribution facilities for frozen foods and increased freezer space at retail and in the home; and (3) increased competition from other frozen vegetables.

CANNED CORN[1]

Among vegetables corn ranked after tomatoes and peas in value for processing during the last decade. Cash farm income from the sale of corn for processing accounted for approximately 2.7% of cash income from the sale of all vegetables and 0.1% of total cash income from farm products. The weight of canned corn processed over the period amounted to about 17.5% of the total weight of all canned vegetables. Consumer expenditures on canned corn amounted to about 14.6% of expenditures on all canned and dried vegetables and 0.4% of expenditures on all food. The annual per capita consumption of canned corn remained fairly constant at about 5.0 pounds.

About 90.1% of the sweet corn produced in the last decade was for processing. Sweet corn has been greatly improved for canning purposes since World War II by the development of hybrid varieties. The processors usually contract annually with the growers for their requirements at a negotiated minimum price; the acreage contracted usually varies according to the size of stocks on hand. Field men keep in close touch with the ripening crop in order to decide when it is at its optimum stage of maturity. Corn that is immature results in a watery pack and over-ripe corn is hard and starchy. The yield per planted acre over the last decade averaged about 2.5 tons.

A large part of the corn crop is now harvested by machine. The ears of corn are then transported by truck from the field to the cannery, where the load is weighed and the farmer paid. In a modern plant, the corn passes through the various canning operations by a conveyor system. This continuous method, with very high cooking temperatures, increases the speed of operation and produces an improved product.

Corn is usually processed into two main "styles"—cream style which may be packed in a brine solution or homogenized ("cremogenized"), and whole kernel style, which may be packed in brine or vacuum-packed. Labelling, casing and storing operations then follow. The different styles of canned corn are graded into Canada "Fancy", "Choice" and "Standard". Husks and trimmings become a by-product feed for livestock.

Corn for canning is grown widely across Canada, but the main producing provinces over the decade of study were Ontario, Quebec and British Columbia. Alberta's and Manitoba's production have been expanding. Ontario and Quebec together accounted for about 82% of the total contracted acreage during the period of study.

Imports of canned corn increased from less than a ton in 1950 to 4,316 tons in 1957. All of the imports came from the United States. Exports varied a lot from year to year, but averaged about 300 tons, if the extremely heavy export-year 1951 is omitted.

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[1] The main references in our public hearings to canned corn were: Winnipeg, *Proceedings*, Vol. 6, pp. 860-2; Toronto, Vol. 15, pp. 2432-3.

There is very little seasonal variation in prices for canned corn at the farm, processing or retail levels. Farm prices are usually negotiated previous to the planting of the season's crop and remain unchanged throughout the season. The size of pack is pretty well determined by the acreages contracted, which are related to the stocks on hand at the time and to the increasing population.

Our estimates of farm-processor-retail spreads on canned corn for the period of study are summarized in Table 55 and shown in Chart 31. The calculation is made on the basis of one ton of sweet corn sold by the farmer for canning.

The farm price increased from $24 a ton in 1949 to $26 a ton in 1952 where it has tended to remain. Annual farm-retail price spreads, therefore, followed the year-to-year pattern of retail prices, ranging from a low of $87 per farm ton in 1954 to a high of $105 per farm ton in 1957. No upward or downward trend is discernible in the spread, however.

The farmer's share of the retail price ranged from a low of 18.0% in 1950 to a high of 23.0% in 1954. In 1957, however, the farmer's share was back to 19.8% compared with the same figure for 1949 and an average of 20.7% over the period as a whole. No upward or downward trend is discernible in the farmer's share. The processor's share of the retail price ranged from a low of 47.9% in 1949 to a high of 68.4% in 1951 and averaged 58.9% over the period as a whole.

CHART 31

PATTERN OF FARM-PROCESSOR-RETAIL VALUES FOR CANNED CORN, CANADA, 1949 TO 1957.

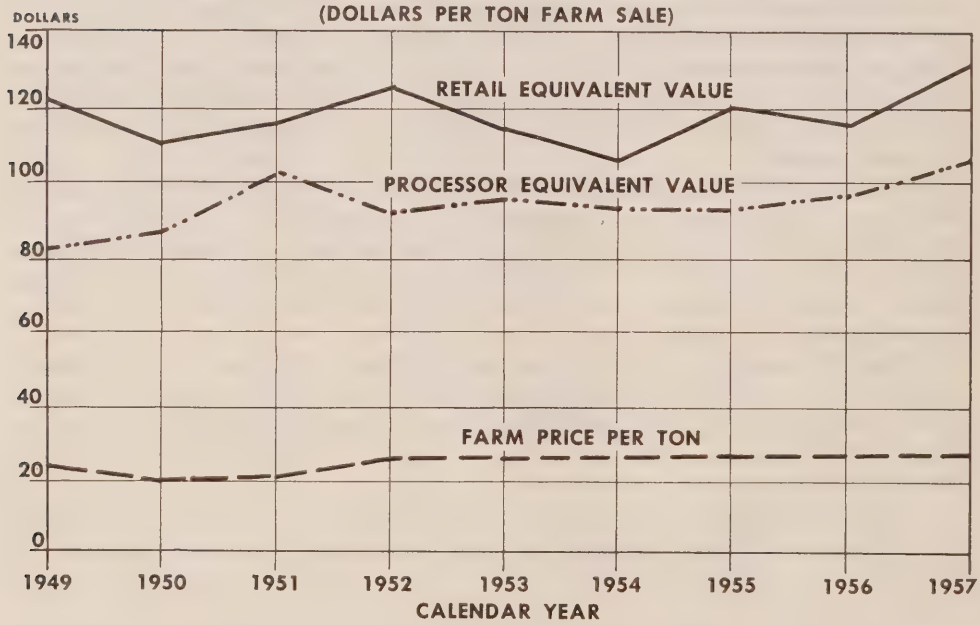

Table 55—Summary of Farm-Processor-Retail Spreads on Canned Corn, Canada, 1949 to 1957[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 Ton Farm Sale	Processor Equivalent Value of 1 Ton Farm Sale	Farm Price Calendar Year Basis	Farm-Retail Spread	Processor's Share of Retail Value	Farmer's Share of Retail Value
	(¢/20 oz. can)	($)	($)	($/ton)	($)	(%)	(%)
1949	19.1	121	82	24	97	47.9	19.8
1950	17.5	111	88	20	91	61.3	18.0
1951	18.4	117	102	22	95	68.4	18.8
1952	19.7	125	94	26	99	54.4	20.8
1953	18.4	117	96	26	91	59.8	22.2
1954	17.9	113	94	26	87	60.4	23.0
1955	19.0	120	94	26	94	56.7	21.7
1956	18.7	118	98	26	92	61.0	22.0
1957	20.7	131	106	26	105	60.1	19.8

[a] Adapted from price spread study of canned corn in Volume III where a fuller explanation of procedure etc. is given.

APPLES[1]

Apples are an important fruit. During the last decade, cash income from the sale of apples accounted for about 44.1% of total cash farm income from the sale of fruit and 0.7% of total cash income from farm products. Consumer expenditures on fresh apples accounted for about 20.7% of total expenditures on fresh fruits and 1.2% of expenditures on all foods. The annual per capita consumption of fresh apples declined over the decade, averaging about 24.6 pounds.

Because of their perishable nature, apples require for their complete protection in marketing a strong, firm, clean and smooth package, with the apples inserted under gentle compression to prevent them from rolling about and bruising. Cool storage is needed for keeping apples. Although some storage is done on the farm and in the later stages of marketing, storage takes place mainly in co-operative or commercial warehouses and packing plants prior to wholesaling. The grading, packing and storage of apples, therefore, is a time-consuming and costly process. In practice, a compromise is struck between incurring more of these marketing costs and foregoing the premium prices to be obtained for top quality and late marketing. During the last decade, the amount of marketing costs incurred increased substantially. For example, with the advent of controlled-atmosphere (CO_2) storage, domestic apples are becoming available (at a price) the year around.

The annual fluctuations in size of apple crops create costly problems of adjustment in the industry. The last 31 years show that there is a fair chance of apple prices across Canada dropping sharply one year in every two or three due to bumper crops. If the industry were to gear itself to market the bumper crops, then in other years there would be excess capacity which is expensive to maintain. On the other hand, a marketing capacity adequate only for a small crop would

[1] The main references in our public hearings to this subject were; Vancouver *Proceedings*, Vol. 1, pp. 120-1, 137-9, 160-96 and Vol. 2, pp. 278-9; Winnipeg, Vol. 7, pp. 1041-2, 1045; Halifax, Vol. 13, pp. 2155-6; Toronto, Vol. 15, pp. 2385-9; Montreal, Vol. 21B, pp. 3537-8; Ottawa, Vol. 27, pp. 4337-9.

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often resulting considerable spoilage. What has resulted in practice is a marketing capacity somewhere between these two extremes, with the processing branch of the industry assigned the accommodating role of stabilizer. There is some indication of the processing branch of the industry assuming an increasingly important and independent role.

The largest markets for apples are in Ontario and Quebec, close to the producing areas in these provinces, but a long and expensive haul from the British Columbia and Nova Scotia producers. Consequently there have been persistent differences among these four main producing provinces in average farm values of apples. Over the 1949 to 1957 period, Quebec and Ontario had the highest farm values (averaging $1.39 and $1.27 per bushel respectively) while Nova Scotia and British Columbia had the lowest farm values ($.80 and $.95).

Within any calendar year, there is a seasonal price pattern caused by apple harvesting being concentrated in the late summer and early autumn while consumption is spread out, rather unevenly, over three-quarters or more of the year. October is usually the month of highest marketings. The seasonal price pattern varies by apple variety and market, but the lowest prices are generally in October-November and the highest prices in July. Not many Canadian apples have been available for sale during the highest-price months June to August, but this volume is increasing with the introduction of controlled-atmosphere storage.

The results of our calculations of the farm-retail spread on fresh apples are summarized in Table 56 and shown in Chart 32. The retail price is for the "volume seller". Monthly farm and retail prices were weighted by domestic unloads to derive weighted crop-year prices. The crop year was taken as August 1 to July 31. An adjustment of 10% was made to the weighted retail price to allow for waste, shrinkage etc. in marketing.

The farm-retail spread was at a maximum in the crop year 1954/55. The spread increased from $2.38 per farm bushel in 1949/50 to $4.21 in 1954/55, receded to $3.82 in 1955/56, and then returned to $4.20 in 1957/58. Over the period as a whole, the farm-retail spread widened prominently.

Farm price, expressed as a proportion of equivalent retail value, increased from 32.6% in 1949/50 to a maximum of 35.5% in 1952/53, and then declined

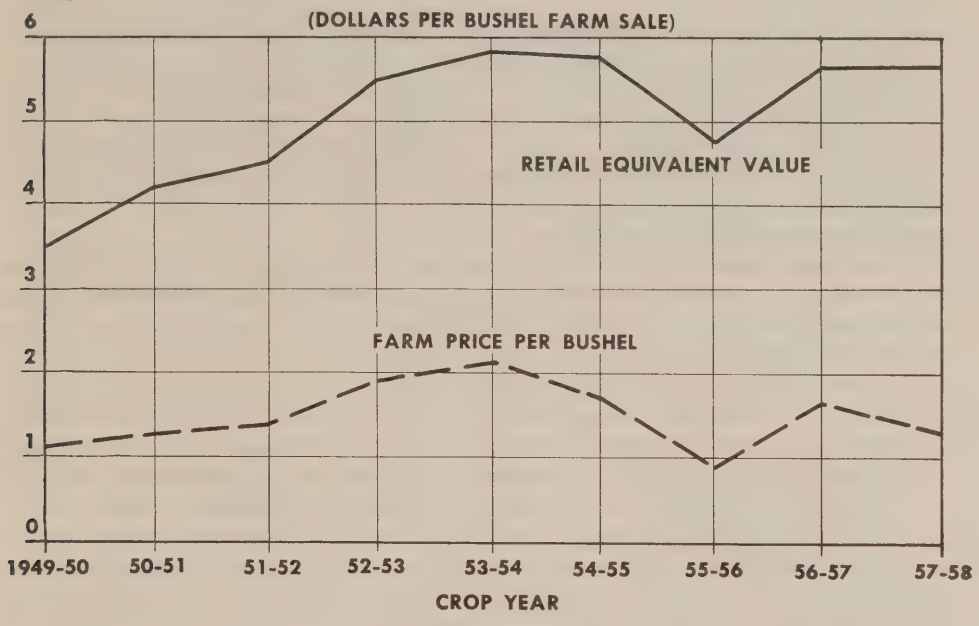
Table 56—Summary of Farm-Retail Spreads on Fresh Apples, Canada, Crop Years 1949/50 to 1957/58[a]

Crop Year	Weighted Retail Price	Retail Equivalent Value	Farm Price	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/lb.)	($)	($/bu.)	($)	(%)
1949/50	8.7	3.53	1.15	2.38	32.6
1950/51	9.9	4.01	1.24	2.77	30.9
1951/52	11.3	4.58	1.43	3.15	31.2
1952/53	13.7	5.55	1.97	3.58	35.5
1953/54	14.7	5.96	2.07	3.89	34.7
1954/55	14.6	5.91	1.70	4.21	28.8
1955/56	11.8	4.78	.96	3.82	20.1
1956/57	13.9	5.63	1.73	3.90	30.7
1957/58	13.9	5.63	1.43	4.20	25.4

[a] Adapted from price spread study of apples in Volume III where a fuller explanation of procedure etc. is given.

CHART 32

PATTERN OF FARM-RETAIL PRICES FOR FRESH APPLES, CANADA, CROP YEARS, 1949-50 TO 1957-58.



to 20.1% in 1955/56—a year of extremely large production. The farm share increased to 25.4% of the retail price in 1957/58. The average farm share over the period as a whole was about 30.0%.

The combined packer-transporter-broker-wholesaler share appears to have averaged about 33%, and the retailer's share, about 37%. Systematic data were not available for determining representative shares going separately to packers (shippers), transporters, brokers and wholesalers.

Several influences were at work in widening the farm-retail spread—longer and more expensive storage (both cold and controlled-atmosphere storage); higher packing-house costs due to increased wages and a multiplicity of containers, several of which are increasingly elaborate; increased freight rates; and more advertising and promotion. Wholesale and retail margins increased.

At the Vancouver hearings we were told that compulsory, one-desk, pooled selling by the British Columbia Tree Fruits Board was not in the interests of many producers. This particular question was the special concern of the British Columbia Royal Commission on The Tree-Fruit Industry (MacPhee Commission) which published its report in October, 1958.[1]

The price spread calculations made for the MacPhee inquiry covered four varieties of apples (McIntosh, Delicious, Winesaps and Newtons) for the 1957/58 season. The retail prices were averages for all sizes of the Fancy grade. The

[1] The Report of the Royal Commission on *The Tree-Fruit Industry of British Columbia* (MacPhee Report), Victoria, October 1958, pp. 614-637. Also see our Part II, Chapter 3, Section 3.

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spread was computed for four major western markets—Vancouver, Calgary, Winnipeg and Regina. The results of the study show that prices and price spreads varied considerably from variety to variety, from city to city, and from outlet to outlet.

The combined wholesale-retail share of the retail price of British Columbia apples in the four western markets in 1957/58 came to about 40%. This was an average for independent retailers and chains in a heavy crop year.

The report points out that the share of the retail price going to the chain stores (which usually perform their own wholesaling) was lower than the combined shares of independent wholesalers and retailers, and condemns the high markups taken by some Calgary and Winnipeg wholesalers and some Vancouver and Winnipeg independent retailers.

The conclusion of the MacPhee Report respecting the share of the final price going to chain stores and to the independent wholesaler-retailer combination is consistent with the results of our study. We have not been able to make, for the various commodities we have studied, the detailed analysis of particular markets which the MacPhee inquiry was able to make for apples. However, in view of the fact that the general retail spread for apples as measured by this Commission averaged 37% over the period, a combined wholesale-retail share in the four western markets in 1957/58 of about 40% does not seem to be relatively high.

We would expect that the markups of Vancouver wholesalers would be considerably lower than in Calgary, Regina and Winnipeg. Being closer to the source of supply, Vancouver wholesalers should have lower transportation costs, less storage, and less spoilage. Since they can, using their own trucks if they wish, go directly to the packing houses in the Okanagan, Vancouver wholesalers do not need to keep large supplies of apples on hand.

There are several possible explanations of the high markups of the independent Vancouver retailers to which the MacPhee Report referred. Some of the apples handled by these independents are bought from nearby coastal growers who operate outside the area of the British Columbia Tree Fruit Board. The prices paid for the coastal apples are probably considerably lower than the prices for apples bought from the British Columbia Fruit Board and, if they sell at the same price, their retail markup would be high and would raise the average markup on all apples retailed. Another explanation is that apples retailed in Vancouver tend to be of lower quality and are subject to greater spoilage. Apples shipped to the more distant markets must be of the highest quality to absorb the high cost of transportation. Sales in small quantities, combined with special services such as remaining open late and on holidays, would raise the markups of independent retailers. It may also be that, because they are close to the source of supply, some independents undertake some of the wholesaling function.

Despite the high markups of independent retailers, we note that Vancouver retail prices are usually lower than in other cities. This is due both to low wholesale markups and to the fact that apples retailed in Vancouver are subject to lower transportation costs. It is probably also due to the competition from apples imported from Washington State.

From the MacPhee inquiry it appears that on the average the British Columbia grower received about 25% of the retail price for his apples in 1957/58.

This corresponds closely to our estimate for Canada as a whole for that year—a year in which the apple crop was large and, therefore, normally the farm share would be smaller than usual. The British Columbia grower's share and the share going to the packing house were found to be lower in markets close to the growing areas than in more distant markets, although retail prices tended to increase with increasing distances from the point of production.[1] This suggests that the selling prices of the British Columbia Fruit Board in British Columbia markets may be high enough when pooled to subsidize in part the transportation costs on apples to more distant and more competitive markets. This policy, combined with high retail markups, would explain the complaint we received from the British Columbia representative of the Canadian Association of Consumers. We were told that consumers are constantly asking why the prices of Okanagan apples should be so high in British Columbia.

In Halifax, the Nova Scotia branch of the Canadian Association of Consumers expressed the conviction that the farm-retail spread on apples was "entirely too great". Figures were cited of $1.38 per bushel to the grower and $4.50 at retail. The grower's share in this case (34.0%, allowing for waste) was above the Canadian average (see Table 56), which is what we might have expected in view of the shortness of the haul of Nova Scotia apples to the Halifax market.

The Nova Scotia Association of Consumers also suggested to us that the size (as well as the grade and variety) of apple should be marked on the package. This suggestion would permit more informative buying of apples and discourage infractions of minimum size and sizing regulations. Federal grading regulations for the interprovincial and export trade specify a minimum size of $2\frac{1}{4}$ inches and require uniform sizing.

At the Toronto hearings, we were told by the Ontario branch of the Canadian Association of Consumers that consumers are in danger of losing their wide choice in selection of apple varieties. This was attributed to the volume merchandising of influential chain stores which handle a limited number of apple varieties. We were told that because of the present emphasis on red apples, some of the finest cooking apples have to be sold almost entirely to processors. We are sympathetic to the Association's plea for educational advertising by the apple growers to inform our younger generation that flavour and quality are not the exclusive prerogative of red apples.

The Ontario Association of Consumers pointed out that the apple grower may have more than a dozen alternative channels, more or less direct, for marketing his product. The Association felt that the existence of 1,300 licensed fruit and vegetable dealers in Ontario indicated that distribution was cumbersome and needlessly costly to consumers.[1] It was not possible to test the validity of this claim that limiting the number of middlemen in the fruit and vegetable trade would reduce the price spread.

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[1] Except that the lower freight rates into Winnipeg compared to Regina usually were reflected in higher prices in Regina. See *MacPhee Report,* p. 629.

[2] A "dealer" is someone (other than a retailer) who collects, or buys produce from primary producers, and consigns or transports or sells it.

STRAWBERRIES

The amount of land used for strawberry production in Canada is small, but the crop is not unimportant. Cash farm income from strawberries over the last decade amounted to about 14.2% of farm income from all fruit, but it has been below this average in the last two or three years. Cash farm income from strawberries accounted for 0.2% of total cash income from farm products. A little more than half of the strawberries grown in recent years were marketed as fresh fruit and the rest were processed. Consumer expenditures on strawberries accounted for about 3.1% of expenditures on all fresh fruit and 0.2% of expenditures on all foods. In recent years Canadians have consumed about 2.7 pounds (farm weight) of strawberries per capita annually. Fresh and frozen strawberries accounted for most of this consumption, in about equal amounts, leaving approximately ¼ pound per capita consumption of canned strawberries. The per capita consumption of fresh and canned strawberries did not change much over the last decade, but the per capita consumption of frozen strawberries increased.

Strawberry production is seasonal and the product is highly perishable. The size of the crop and the length of a particular harvesting season vary a lot with weather conditions, but harvesting is concentrated in June and July. A short harvesting season is not peculiar to strawberries; what makes it so important in this case is the high degree of perishability of the fruit and its vulnerability to weather conditions. The resulting effects upon the quantity and quality of the fruit can cause year-to-year variations in price. Also, the market price is highly variable from day to day in response to picking conditions. If bad weather prevents picking one day, the next day a large supply of berries reaches the market and must be sold at whatever price they can fetch.

Because of this perishability, ripe strawberries must be carefully hand-picked, marketed in protective containers, and distributed rapidly to avoid costly deterioration. Adequate information was not available for estimating the typical amount of waste between the farm and retail. Berries picked at the right stage of maturity, moved to market promptly under refrigeration, and handled expeditiously through retail channels could be almost free from waste. On the other hand, berries of advanced maturity, picked while wet, and subjected to rough or delayed handling could have a high proportion of waste. The answer usually lies somewhere between these extremes, and varies seasonally depending upon the weather. The mechanics of marketing fresh strawberries have not changed much during the last decade, but there is at least one reason for thinking that there has been a gradual reduction in spoilage. Transportation, particularly by refrigerator truck, has undoubtedly improved over the decade of study, thereby contributing to less waste and better quality of fruit.

As far as the channels of marketing are concerned, such a perishable product cannot change hands often. What has become increasingly conspicuous over our period is supermarket chains dealing directly with larger strawberry growers.

The alternative to selling strawberries as fresh fruit is to preserve them by processing—canning, freezing or jam-making. The grower usually makes direct

delivery to the processor. Our studies indicate that the grower ordinarily receives about two cents per quart less for strawberries sold for processing than for those for the fresh market. The cost of producing strawberries for processing is probably lower—these strawberries are picked into larger containers and are sold in larger volume. There are about 80 plants processing strawberries in Canada.

The processors sell to wholesalers or directly to large retail outlets. Sometimes the processor may sell through a broker. Whether sold fresh or in processed form, strawberries typically incur substantial costs in production and marketing. This, of course, has a direct bearing on prices and the price spread.

In the second half of our period, the production of strawberries in Canada fell compared with the first half. Since domestic sales to processors did not decline as fast as domestic production, they represented an increase in the proportion of Canadian strawberries processed. During the decade of study, exports of strawberries declined and imports increased prominently: both fresh and frozen imports for both processing and the fresh trade. The imported fresh strawberries often sell at premium prices, even after the domestic berries have reached the market.

The three provinces of Ontario, British Columbia and Quebec account for about 90% of the strawberries produced commercially in Canada. The strawberry crop is also important in Prince Edward Island, Nova Scotia and New Brunswick. From a farm-income viewpoint, strawberries are more important to British Columbia agriculture than to that of any other province. Over the last decade, British Columbia processed about 63% of its production, Ontario 42%, Prince Edward Island 41%, and Quebec about 31%. The amounts of strawberries processed by the provinces vary from year to year, but British Columbia processed about half of the total for Canada, Ontario about 30% and Quebec about 17% of the total for Canada.

There was remarkably little seasonal (month-to-month) variation in the retail prices of canned and frozen strawberries over our period. An explanation for this price stability lies in the normal pattern of seasonal variation in inventories of canned and frozen strawberries. Inventories are progressively decreased during the autumn, winter and spring and are then rebuilt by the new pack during June and July.

Systematic monthly data were not available on the retail prices of fresh strawberries, but it is known that the fresh strawberry market is concentrated in a two-month interval beginning early in June. It is customary for the retail price to begin from a peak at the beginning of the marketing season and then fall within three weeks to a plateau from which it rises again towards the end of July.

Availability of data permitted us to calculate farm-retail price spreads on canned and frozen strawberries only, and in the latter case only for the years 1952 to 1957.

The results of our calculations of the farmer-processor-retailer spreads for canned strawberries are summarized in Table 57 and shown in Chart 33. The retail prices of canned strawberries are available for the "Choice" grade, 15-ounce tin. For farm-retail comparability, these retail prices were adjusted to give the retail value equivalent of the canned strawberries derived from one quart of fresh strawberries. By similar treatment, it was possible to derive a comparable processor's selling value. (The strawberry content of the canned strawberries is not, of course, the only cost component in the processor's and retailer's prices.)

Table 57—Summary of Farm-Processor-Retail Spreads on Canned Strawberries, Canada, 1949 to 1957[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 qt. Fresh	Processor Selling Equivalent Value of 1 qt. Fresh	Farm Value Calendar Year Basis	Farm-Retail Spread	Processor's Share of Retail Value	Farmer's Share of Retail Value
	(¢/15-oz. can)	(¢)	(¢)	(¢/qt.)	(¢)	(%)	(%)
1949	27.8	58.9	47.1	19.3	39.6	47.2	32.8
1950	29.2	61.9	49.9	21.2	40.7	46.4	34.3
1951	29.7	63.0	49.1	23.9	39.1	40.0	37.9
1952	32.1	68.1	44.9	20.8	47.3	35.4	30.5
1953	29.2	61.9	51.9	18.6	43.3	53.8	30.1
1954	32.1	68.1	50.9	20.5	47.6	44.6	30.5
1955	32.3	68.5	49.8	23.0	45.5	39.1	33.6
1956	31.5	66.8	54.6	23.7	43.1	46.3	35.5
1957	32.2	68.3	50.2	22.5	45.8	40.6	32.9

[a] Adapted from price spread study of strawberries in Volume III where a fuller explanation of procedure etc. is given.

The cost to the processing plants per quart of fresh Canadian strawberries was taken as the basic farm value, but the preceding and current crop prices were weighted to derive calendar-year prices comparable to the retail prices.

The farm-retail spread on canned strawberries widened moderately over the period as a whole. The farm price rose slightly over the period, but not as fast as the retail price. The widening in the farm-retail spread took place almost entirely in the combined wholesaler-retailer spread (or broker-wholesaler-retailer spread). Sufficient data were not available to enable us to separate the wholesale and retail spreads.

The farmer's share declined slightly and the processor's share increased slightly over the period. The combined wholesaler-retailer share also increased a little. The farmer's share over the period as a whole amounted to about 33.1%, the processor's share amounted to about 43.7%, and the combined wholesaler-retailer share amounted to about 23.2%. When the processor sells through a broker, the brokerage fee amounts to 2½% to 3% of the f.o.b. factory price.

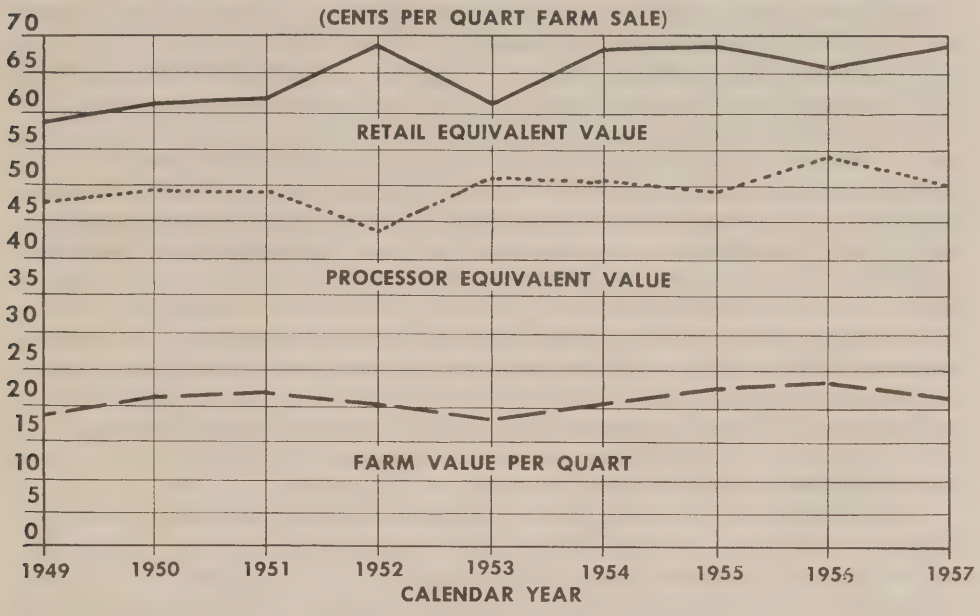
Retail prices for frozen strawberries are available from mid-1952 on, for the 15-ounce package. In order to estimate the farm-retail spread on frozen strawberries for this period, it was necessary to assume that the farm price of strawberries for freezing was the same as for canning. The results of our calculations are summarized in Table 58.

In marked contrast with canned strawberries, the farm-retail spread on frozen strawberries narrowed substantially over the period. Retail prices declined while farm prices rose. The farmer's share increased from an average of 24.5% during the three-year period 1952 to 1954 to 31.8% during the period 1955 to 1957.

The downward drift in the price of frozen strawberries, in contrast with a rising retail price for canned strawberries, requires some explanation. The volume of frozen strawberries has been increasing rapidly. Also, increased freezer space

CHART 33

PATTERN OF FARM-PROCESSOR-RETAIL VALUES FOR CANNED STRAWBERRIES, CANADA, 1949 TO 1957.



in retail outlets and keen competition have exerted a downward pressure on the price of frozen strawberries. In addition, handling and freezing operations have become more mechanized, thereby lowering per-unit production costs. In contrast with the expanding supply of frozen strawberries, the pack of canned strawberries is small and stable from year to year.

Table 58—Summary of Farm-Retail Spread on Frozen Strawberries, Canada, 1952 to 1957[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 qt. Fresh	Farm Value Calendar Year Basis	Farm-Retail Spread	Farmer's Share of Retail Value
	(¢/15-oz. pkg.)	(¢)	(¢/qt.)	(¢)	(%)
1952	50.1	78.7	18.0	60.7	22.9
1953	49.7	78.0	18.6	59.4	23.8
1954	48.5	76.1	20.5	55.6	26.9
1955	47.3	74.3	23.0	51.3	31.0
1956	46.8	73.5	23.7	49.8	32.2
1957	44.5	69.9	22.5	47.4	32.2

[a]Adapted from price spread study of strawberries in Volume III where a fuller explanation of procedure etc. is given.

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PEACHES[1]

Among fruits grown in Canada, apples take pride of first place from the point of view of income to producers, while second and third place are taken interchangeably by peaches and strawberries. Canadian peach growers received between three and six million dollars income annually over the last decade. This represented an average of 12.1% of cash farm income from the sale of all fruit and 0.2% of total cash income from farm products. Consumer expenditures on canned peaches during the period of study were greater than on any other canned fruit. Consumer expenditures on canned peaches amounted to 17.4% of total expenditures on canned fruit and 0.4% of expenditures on all foods. Consumer expenditures on fresh peaches amounted to 3.0% of expenditures on all fresh fruit and 0.2% of expenditures on all foods. Per capita consumption of fresh and canned peaches combined increased from 5.7 pounds in 1949 to 8.2 pounds in 1957.

Peaches are among the most perishable of fruits in Canada, and are available for fresh consumption for only two to three months during a year. They have to be packed and handled with special care and moved to the market promptly. The marketing of fresh peaches includes three major functions—packing, transporting and selling. Packing and selling are usually performed by different firms which specialize in one or other of these functions.

Packing peaches is a costly process in which materials account for over one-half of the cost, labour over one-fourth, and overhead (which includes depreciation on building and equipment, taxes, power, repair and miscellaneous) for the rest. When fresh peaches are sold directly out of the orchard to the consumer, there are no custom packing costs, and the grower charges the retail price. When, however, selling is done through commercial channels, the packers, wholesalers and retailers apply their markups which include an allowance for the risk of spoilage.

Because fresh peaches cannot be kept for long, processing has become a very important development in the peach industry. Processing makes quality peaches readily available throughout the year. The canners play an important stabilizing role in the peach industry by processing that part of the crop which cannot be disposed of on the fresh market. Over the last decade about 50% of the total peach production was used for processing and sold subsequently as canned peaches. In prewar years less than 30% of the crop was processed. Dried and frozen peaches have made their debut in the past few years, but the quantities produced are small.

Although there have been considerable variations in the production of peaches from year to year, the trend in peach production has been upward for several decades. Over the last 20 years the production has increased by two-and-one-half times. The commercial production of canned peaches shows an upward trend similar to that of total peach production.

The level of farm and retail prices of peaches is closely related to the size of the crop. There is, however, a difference between the fluctuations of farm and retail prices for fresh peaches on the one hand, and the retail prices of canned

[1] The main references in the public hearings to this subject were: Toronto, *Proceedings*, Vol. 15, pp. 2432-3 and Vol. 16, pp. 2635-6, 2658-9.

peaches on the other. The former react quickly to changes in the size of the crop and show greater fluctuations, whereas the latter maintain much greater stability and usually react after a time lag.

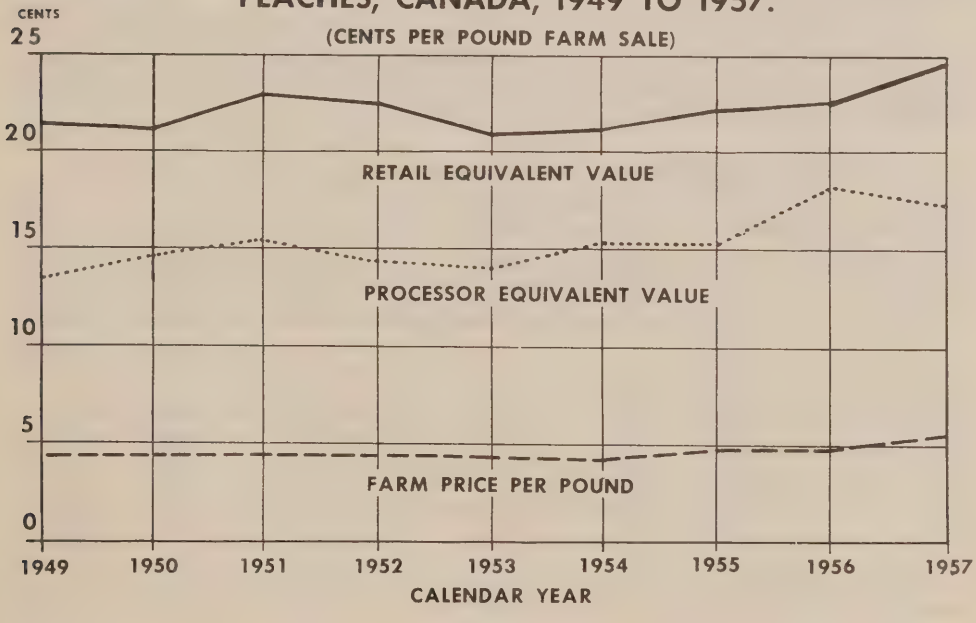
The production of peaches in Canada is practically confined to the southern parts of Ontario and British Columbia. Generally Ontario produces 80% of the crop and British Columbia 20%. This ratio of four-to-one changes in some years because unfavourable weather conditions can affect the crop in one province or the other. Because these two peach-producing regions are so widely separated, they also may be differently affected by market conditions. In general, farm prices of peaches in Ontario were higher and more stable during our period than in British Columbia.

In British Columbia the marketing of peaches is done through B.C. Tree Fruits Limited which acts as the central sales agency for the whole regulated area. The British Columbia growers get an average price for each grade and variety of peaches irrespective of how these are used. In Ontario, however, there are two marketing boards for peaches, one for peaches for processing and the other for peaches sold to the fresh market. The growers selling peaches to these two different markets get different prices. About 50% of Ontario peaches and nearly 40% of British Columbia peaches were processed during our period of study.

Up to 60% of Ontario peaches are marketed inside the province and the remainder is sent to Quebec, the Atlantic Provinces and the Prairies. British Columbia peaches find their most important market inside the province and in

CHART 34

PATTERN OF FARM-PROCESSOR-RETAIL VALUES FOR CANNED PEACHES, CANADA, 1949 TO 1957.



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Alberta. Generally the distance to market is one of the main factors determining the means used to haul peaches to their destination. About 60% of fresh peaches are transported to market by rail, the rest by truck.

The results of our calculations of the farm-processor-retail spreads on canned peaches during the nine-year period 1949 to 1957 are summarized in Table 59 and shown in Chart 34. The estimates are based on national averages and are subject to variation when applied to a specific place, time, quality or size of container. The farm and processor prices used are average prices for all grades, varieties and sizes of containers, while the retail prices are for the "Choice" 15-ounce can. In view of this the farmer's share as shown in these estimates is slightly on the low side.

Although there have been year-to-year changes in prices, the overall relationship between the farm, processor and retail prices did not change much over the last decade as a whole. The farmer's share showed only a slight increase and the difference between the highest and the lowest share was less than 2% over the whole period. The farm-retail spread in 1957 was considerably larger than in previous years. On the average, the farmer's share of the retail value was about 21%, the processor's share about 48% and the wholesale-retail share combined, about 31%.

National estimates of the farm-retail spread on fresh peaches could not be made for lack of a continuous series of retail prices. Data presented to us for the Toronto area indicate, however, that the farmer's share for fresh peaches in that market was about 45% during the 1957 season. The grower's and retailer's shares were higher at the beginning and end of the season when marketings were lower and prices higher. Fixed costs such as transportation, marketing-board deductions and container costs made up a larger share of the retail price in mid-season when the price was low.

The Ontario Government brief drew our attention to the shift since 1956 towards direct dealings between the supermarket chains and the new fresh peach growers' co-operative. This trend tends to dispense with the services of certain independent middlemen such as brokers, shippers and wholesalers.

Table 59—Summary of Farm-Processor-Retail Spreads on Canned Peaches, Canada, 1949 to 1957[a]

Calendar Year	Retail Price	Retail Equivalent Value of 1 lb. Fresh	Processor Equivalent Value of 1 lb. Fresh	Farm Value Calendar Year Basis	Farm-Retail Spread	Processor's Share of Retail Value	Farmer's Share of Retail Value
	(¢/15-oz. can)	(¢)	(¢)	(¢/lb.)	(¢)	(%)	(%)
1949	20.7	21.6	13.8	4.6	17.0	42.6	21.3
1950	20.3	21.2	14.8	4.5	16.7	48.6	21.2
1951	21.8	22.8	15.4	4.6	18.2	47.4	20.2
1952	21.6	22.6	14.1	4.6	18.0	42.0	20.4
1953	20.2	21.1	14.0	4.5	16.6	45.0	21.3
1954	20.5	21.4	15.2	4.5	16.9	50.0	21.0
1955	21.2	22.2	15.1	4.7	17.5	46.8	21.1
1956	21.5	22.5	18.1	4.9	17.6	58.7	21.8
1957	23.8	24.9	17.0	5.2	19.7	47.4	20.9

[a]Adapted from price spread study of canned peaches in Volume III where a fuller explanation of procedure etc. is given.

SUGAR BEETS[1]

In recent years Canadians consumed, both directly and indirectly in other foods and beverages, about 97 pounds of refined sugar per capita annually. The direct consumption of sugar amounted to about 53 pounds per capita. Consumer expenditures directly on sugar accounted for about 1.2% of all urban expenditures on food. About 18% of the sugar consumed was beet sugar—grown and refined domestically in the Lethbridge area of Alberta, near Winnipeg in Manitoba, in southwestern Ontario, and in the vicinity of St. Hilaire in Quebec. Sugar beets are important to the farmers in these localities, as a source of both cash income and good, cheap by-product feed for livestock. Many growers also work in the sugar beet factories during the refining season.

During the period under study cash farm income from sugar beets accounted for 0.5% of total cash farm income from farm products. According to the 1956 Census, 4,773 sugar beet growers in that year harvested, on the average, 187 tons of beets worth $3,242 from 16.5 acres. The yield of refined sugar from a ton of beets averaged about 267 pounds over the last decade, which is a yield of about 13.4%. Comparing the first half of our period with the second half, the regional shift in sugar beet production has been such that the increasing production in Alberta and Manitoba has more than offset the declining production in Ontario and Quebec.

The total domestic production of refined sugar over the last decade was subject to variations from year to year about a rising trend line. Moreover, there is a seasonal pattern in sales with the peak during the summer and the low level during the winter. Some stability in sugar prices has been imparted, however, by compensatory inventory adjustments. Retail prices of sugar are quite stable from month to month.

The production of refined beet sugar has been more variable than that of cane sugar. The instability in beet sugar production is the joint result of year-to-year variations in sugar beet acreages, yields per acre, and the yield of refined sugar per ton of beets.

Variations from year to year in the sugar content of sugar beets have a direct bearing on the refining costs of sugar, and so the price paid for beets is related to this factor as well as to the price of refined sugar. The perishability of sugar beets necessitates processing before the severe winter cold sets in, which means concentrating the processing in the fourth quarter of the year. As far as the refining operation is concerned the sugar beet factories then stand idle for more than two-thirds of the year.

The results of our calculations of the farm-retail spread on sugar beets for the Prairie region are summarized in Table 60 and shown in Chart 35. Both sugar beet production and beet sugar consumption are distinctive (although not exclusive) features of the Prairie region of Canada, and so sugar beet price spread calculations for this region are more valid and reliable than for other regions or for Canada as a whole. The calculation is based on a year-to-year

[1] The main references in our public hearings on this subject were: Vancouver, *Proceedings,* Vol. 2, pp. 288-9; Edmonton, Vol. 5, pp. 666-8; Ottawa, Vol. 26, pp. 3986-4056, and Vol. 27, p. 4340.

Table 60—Summary of Farm-Refinery-Retail Spreads on Sugar Beets into Sugar, Prairie Region, Crop Years, 1949/50 to 1957/58[a]

Crop Year	Retail Price Sugar	Retail Equivalent Value of 1 Ton Beets	Refinery Equivalent Value of 1 Ton Beets	Farm Price	Farm Value of Beets Less By-Products	Farm-Retail Spread	Refiner's Share of Retail Value	Farmer's Share of Retail Value
	(¢/lb.)	($)	($)	($/ton)	($)	($)	(%)	(%)
1949/50	11.4	28.63	23.73	13.29	13.07	15.56	37.2	45.7
1950/51	13.9	37.31	28.50	17.32	16.96	20.35	30.9	45.5
1951/52	14.0	32.10	25.68	15.71	15.11	16.99	32.9	47.1
1952/53	12.3	36.29	29.59	15.53	15.29	21.00	39.4	42.1
1953/54	11.3	30.45	25.28	13.78	13.43	17.02	38.9	44.1
1954/55	10.8	26.60	22.81	12.71	12.42	14.18	39.1	46.7
1955/56	10.9	30.49	26.15	14.47	14.13	16.36	39.4	46.3
1956/57	13.3	37.32	31.34	17.93	17.55	19.77	37.0	47.0
1957/58	12.2	28.99	23.26	13.27	12.98	16.01	35.5	44.8

[a]Adapted from price spread study of sugar beets in Volume III where a fuller explanation of procedure etc. is given.

comparison of the farm price of a ton of sugar beets, less the farm value of by-products, and the refinery and retail values of the amount of sugar refined each year from a ton of beets.

The farm-retail spread on a ton of sugar beets in the Prairie region decreased over the period of study as a whole, averaging $18.58. The spread increased from $15.56 in 1949/50 to a maximum of $21.00 in 1952/53, and then declined to a minimum of $14.18 in 1954/55. The spread increased again in 1955/56 and 1956/57 and decreased in 1957/58.

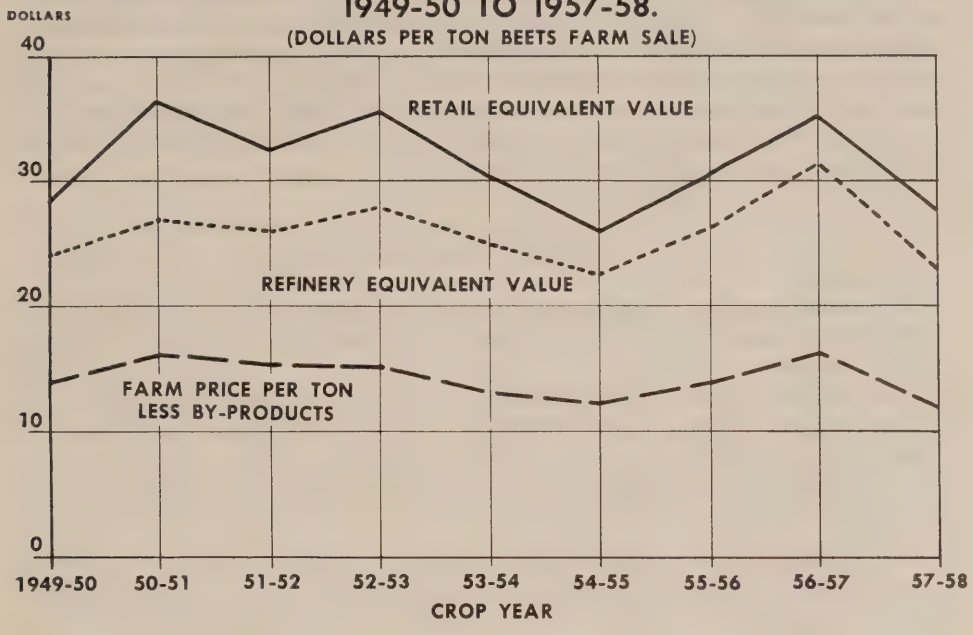
The sugar beet grower's share of the retail price in the Prairie region averaged 45.5% over the period as a whole, being highest (47.0%) in 1956/57. No upward or downward trend in the grower's share was discernible. The refiner's share of the retail price increased slightly over the period of study and averaged 36.7%. A combined share of 17.8% is, therefore, left for the wholesaler and retailer; this magnitude seems to corroborate a statement made to the Commission at our Ottawa hearings to the effect that at wholesale and retail sugar is a "high volume, rapid turnover, low markup product".

At the Ottawa hearings, we were also informed that cane sugar can be produced more cheaply than beet sugar. To succeed in the face of this competition, the beet sugar industry depends both on protection through tariffs on imports of raw and refined cane sugar and on costs of transporting competitive cane sugar into the Prairie Provinces. The price of beet sugar is set with reference to the world price of raw cane sugar, plus the tariff[1] and ocean freight on it into Canada, plus the cost of refining it, plus the cost of freight from Montreal or Vancouver to the interior market. The highest price is reached in eastern Saskatchewan. This technique of price-setting has sometimes been referred to as a "basing-point system". During the period of study, the beet sugar refineries shifted from a policy of granting a trade discount to wholesalers and special price concessions to certain customers to a general policy of setting their beet prices at 10 to 20 cents less per 100 pounds than the cane sugar price arrived at by the

[1] The British Preferential tariff on raw sugar averages 28.7 cents per 100 lb.

CHART 35

PATTERN OF FARM-REFINERY-RETAIL VALUES FOR SUGAR BEETS INTO SUGAR, PRAIRIES REGION, CROP YEARS 1949-50 TO 1957-58.



basing-point system. Since we have no evidence of a cane-beet price differential on sugar at retail, we conclude that the combined wholesale-retail spread on beet sugar is appreciably wider than on cane sugar.

At our Edmonton and Ottawa hearings, our attention was drawn to the contractual arrangement between each sugar beet grower and the processing company. The grower and the company share contractually in the company's net selling price of refined beet sugar, after deducting selling expenses (such as freight, discounts, storage, brokerage, shipping costs and losses, sales, salaries and travelling, insurance, and advertising). We have been told by the farmers and the processors that this has been a mutually satisfactory arrangement, in recent years at least.

The contractual share of the beet sugar processor's price going to the grower was originally 50%, but it increased to a level of about 63% in recent years. In Edmonton, it was suggested to us that this gain was due to increased growing costs. We were told, rather to our surprise, that the effect of mechanization had been to raise growing costs. In our opinion growing costs would have been higher if mechanization had not taken place. At our Ottawa hearings, it was suggested that possibly the main explanation of the rising grower's share of the refiner's price was an increase in volume and extractive efficiency on the part of the processor which made him better able to pay more to the grower.

The consumer interest has also been represented to us. At the Vancouver hearings, we were told that any measures that may be needed to assist sugar beet growers should exclude restriction on imports of cane sugar because this would cost Canadian consumers much more than it would benefit sugar beet growers.

The basing-point system of pricing sugar, already referred to, is the answer to a question raised before us by the Canadian Association of Consumers as to why the price of beet sugar, produced locally, is as high as that of imported cane sugar, taffy, butter, cream and wax—are also processed from maple sap. The prices, and called for an examination into sugar pricing. We would refer them to the inquiries, completed and in progress, by the Restrictive Trade Practices Commission into the sugar industry.[1]

MAPLE PRODUCTS

Generally speaking, maple products are not important from either the consumer's or producer's point of view, but they are an important source of supplementary income to farmers in certain areas of Quebec. Over the last decade in Canada, the per capita consumption of maple syrup declined, averaging about 1.35 pounds per annum. Cash income from maple products accounts for 0.3% of the total cash income from farm products in Canada, and for slightly over 2% of cash farm income in Quebec. Over the last decade Quebec accounted for about 86% of the maple syrup and for about 92% of the maple sugar produced in Canada.

The production of maple syrup has shown a slight downward trend, and there has been a marked increase in the proportion of our maple syrup production which is exported. Exports in recent years have amounted to over 80% of production.

The maple bush can be a good source of off-season income to the farmer, but production fluctuates a lot from year to year due to weather conditions. Syrup production requires considerable readily-available farm labour.

The principal maple product is syrup, but certain speciality products—maple sugar, taffy, butter, cream and wax—are also processed from maple sap. The main difference among all of these maple products lies in moisture content, but colour and flavour are also important. Most consumers prefer a light-coloured syrup. Grades are provided by the Canada Department of Agriculture but grading is not compulsory.

Processing involves the collection, heating, blending, cleaning, packaging and storing of the maple products. Maple syrup is slightly perishable. Perhaps the greatest wastage is due to poor methods on the part of some farmers which result in syrup of poor quality—that is, not readily saleable as a table product at premium prices or, indeed, for other than industrial use. Maple syrup is subject to fermentation if the moisture content has been inadequately controlled during processing. This is important, even to the farmer, who sometimes is left with unsold syrup on his hands beyond the spring season. In processing and bottling

[1] Canada Department of Justice *Report Concerning the Sugar Industry in Western Canada and a Proposed Merger of Sugar Companies,* Ottawa, 1957.

there is some wastage also, but it is probably not great because maple syrup drains readily from containers. Some spoilage in storage after the product reaches the consumer is not unknown.

The crop is disposed of either by direct farm-to-consumer or farm-to-wholesale or farm-to-retail sale in gallon or smaller containers or in bulk to domestic packers and industry and export dealers. Direct marketings by farmers to consumers are mostly seasonal, but commercial packs are sold in the grocery stores throughout most of the year. Maple syrup for table use used to be merchandised mainly in gallon containers, but 26-ounce cans and 16-ounce bottles are being used with increasing frequency. Brand names are used, but extensive advertising seems to be precluded because of the limited volume of sales.

During the last few years at least, maple products have faced keen competition from cheaper artificial substitutes. Although these substitutes are labelled "artificial" they are also labelled "maple", and the general public perhaps thinks that these substitutes are at least partly maple. The Commission was informed that even genuine maple syrup can be up-graded by artificially lightening the colour of dark syrup—this does not enhance its flavour but it looks better and sells at a higher price.

Unfortunately, systematic data on retail prices of maple products were not available for our decade of study. Seasonal information is available, however, on wholesaler-to-retailer prices for maple syrup by major markets (e.g. Montreal and Toronto) and by province of origin. An examination of these data indicated that the normal (but not invariable) pattern of seasonal prices for maple syrup was to begin high and then fall progressively throughout the short spring season.

Because of the lack of data, it was not possible to estimate the farm-retail spread for maple products. The best that could be done, and even this involved pushing the data hard, was to estimate the farm-wholesale spread for maple syrup in Ontario and Quebec. Wholesale quotations are available for the six-to-ten-week syrup season, but these quotations are actually a combination of wholesale and retail prices. This is because a substantial proportion of the maple syrup

Table 61—Summary of Farm-Wholesale Spreads on Maple Syrup, Quebec and Ontario, 1950 to 1957[a]
(Dollars per Gallon)

	Quebec			Ontario		
Calendar Year	Wholesale Value	Farm Value	Farm-Wholesale Spread	Wholesale Value	Farm Value	Farm-Wholesale Spread
1950	3.75	3.44	.31	4.45	4.05	.40
1951	4.07	3.55	.52	4.56	4.29	.27
1952	3.96	3.33	.63	4.80	4.21	.59
1953	4.51	3.69	.82	4.94	4.32	.62
1954	4.64	4.60	.04[b]	4.91	4.28	.63
1955	5.51	4.91	.60	5.36	4.48	.88
1956	5.98	3.57	1.41	5.88	4.71	1.17
1957	4.40	3.08	1.32	4.96	4.65	.31

[a]Adapted from price spread study of maple products in Volume III where a fuller explanation of procedure etc. is given.

[b]Something may be wrong with the official figures for Quebec for 1954; a farm-wholesale spread of 4¢ per gallon seems too small.

reaching the consumer during the maple season is sold by the producer himself on farmers' markets at prices recorded as "wholesale". Furthermore, an unknown amount of maple syrup is sold by the farmer at unknown prices directly to retail stores or to tourists and local residents at roadside stands.

The results of our farm-wholesale price spread calculations for Quebec and Ontario for the eight years 1950 to 1957 are summarized in Table 61. No adjustment was made for waste. The wholesale and farm prices of maple syrup in Ontario exceeded those in Quebec by substantial amounts over the period. Concurrently, the farm-wholesale spread in Quebec exceeded that in Ontario by an average of about 10¢ per gallon. The Quebec spread, moreover, was more volatile from year to year.

There are persistent regional differences in the farm price of maple products. The largest producing province, Quebec, received decidedly lower farm prices for its maple products than the other producing provinces. Ontario, the second largest producer, received the second lowest prices. Since Quebec has a large maple products' co-operative which would try to pay its members as large a return as possible, some explanation is required for Quebec's low farm prices. It has been suggested to us that these farm prices reflect a lower degree of preliminary refinement of maple syrup delivered by Quebec farmers to plants for further processing. Another possible explanation is that Quebec's farm prices are lower because a large amount of the maple syrup is exported in bulk at wholesale prices for industrial purposes. Finally, supplies of maple products in Quebec are large relative to the size of the market, compared with the situations in the other producing provinces. These farm prices, of course, do not indicate relative profits to the farmers, since costs and volume of sales would also have to be taken into consideration.

The farmer's share of the *wholesale* price of maple syrup averaged about 88% in Ontario over the period, compared with about 83% in Quebec. The Commission was informed that the retailer takes a markup of 20% to 25% on the cost to him. If the retail markup in Canada on maple syrup over the period had averaged 20% to 25% (and this is only an assumption) the farmer's share of the retail price would have been between 65% and 69%.

FISHERIES

PART VI

FISHERIES

CHAPTER 1.

THE NATURE OF THE PROBLEM IN THE FISHERIES

1. Dominance of the Export Market

The export market is the dominant force affecting prices realized by Canadian fish processors and wholesalers. Fisheries products are sold largely outside the country; therefore, not only is the price received abroad outside the control of the industry and of the federal or provincial governments, but export sales most often are a dominant factor affecting the scale and costs of production and the volume of supply to the domestic market. But the price received by fishermen is not usually differentiated according to the destination of the product to the domestic or to the export market, even though there may be a persistent difference between the prices realized by the processor or exporter from sales on the two markets. Because the portion of the fisherman's price attributable to sales on the domestic market cannot be isolated, a producer-domestic market price spread, putting aside problems in calculation, has, at best, very limited meaning.

2. Factors Other Than Price Affecting the Welfare of Fishermen

The price of his catch is only one of several factors determining the net income of the fisherman. The cost of fishing as well as the value of the catch determines what the fisherman's net income from his inputs of labour and capital will be, and unit costs of production in fishing are affected by many things, such as the quantity and concentration of the available fish species, the distance to the fishing grounds, the clemency of the weather, the length of the fishing season, the skill and luck of the fisherman, the number of boats and fishermen competing for the catch and the efficiency of the equipment employed in the fishery. Changes in any one or more of these factors usually affect fishermen's productivity and their net incomes.

Through their influence on the number of men employed in the fisheries, regional wage or income levels are basic determinants of the level of fishermen's incomes. Fishermen's receipts from the sale of fish are "opportunity costs" of production, in that fishermen must receive in the long run, if they are to remain in the industry, returns more or less equivalent to what they have an opportunity

to earn in another occupation.[1] As long as the entry of workers into the fishing industry is unrestricted, fishermen will not enjoy incomes much greater than those obtainable in other occupations (of a similar level of skill) in the same region. On the other hand, the availability of alternative occupations in the region sets limits to the entry of workers into the fishing industry and encourages them to leave it if their fishing receipts fall below the level of returns they might expect to earn elsewhere.[2] Fishermen's incomes are, accordingly, dependent not only upon the degree of prosperity in the areas in which their products are marketed, but also (given a degree of labour mobility) upon the economic "climate" of their own area.

Improvement in the productivity of workers in the industry is dependent upon the availability of capital. The way in which the capital is used as well as the amount invested is important; frequently increases in productivity have accompanied a greater degree of concentration of capital and some resultant displacement or reduction in the number of workers. A rising total of capital investment in the Canadian fisheries since 1945 in larger, more mechanized fishing boats and processing plants has been accompanied by progressive decreases in the number of fishermen and plant workers. The availability of capital is related, of course, to the supply and demand situation for the principal fisheries products. Moreover, the existence of relatively high regional wage levels (as in British Columbia) has tended to stimulate investment as a means to increasing labour productivity; this in turn brings economies in the labour factor and thus reduces the cost of production per unit of product.

Few fishermen work for wages and a large number have no share in ownership of the boat and gear with which they fish;[3] consequently institutional arrangements for the sharing of catch receipts between labour and capital are significant in the determination of fishermen's incomes particularly if, in the trend towards larger, more expensive catching units, the fisherman becomes more and more divorced from ownership of the equipment he uses. Under the traditional and typical share or "lay" arrangements, the members of a fishing crew, including the skipper, share in the proceeds from the sale of the catch after the deduction of certain operating expenses and the boat share (the latter constituting the return, including depreciation, on the capital invested). Only a few such as, occasionally, the second man in a lobster boat, work for wages. Most Canadian fishermen, therefore, are co-adventurers or co-sharers in their fishing enterprise, but only some have the status of owners or employers.

Because most fishermen are not wage-earners, their organizations have not the legal status of labour unions for collective bargaining and other matters, and

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1 If fishermen, because of the attractiveness of the life, the lure of possible extraordinary returns, reluctance to break home ties, or sheer inertia, accept smaller monetary returns than they could obtain in another occupation, this in effect reduces the cost of fishing to society.

2 Lack of capital for the necessary equipment may, however, restrict many from entering the industry, and possession of a boat and gear may prevent a fisherman from leaving the industry as long as his catch yields some return on his capital above current costs.

3 According to the 1951/52 Census of the fisheries, there were about 30 thousand fishing enterprises. (An enterprise is defined as the aggregation of capital under the management of an individual, partners or a firm.) These enterprises involved a labour force of about 54 thousand or about two per enterprise. Of these, less than 10% (4 thousand) worked for wages. Most of the remainder, excepting those fishermen operating alone, worked under a share-of-catch arrangement.

fishermen were only recently included under unemployment insurance by special legislation which defines the first buyer of their catch as their employer for the purposes of the Act. Witnesses at the Halifax hearings of the Commission commented on the denial of labour union rights to fishermen in Nova Scotia[1]. In British Columbia minimum prices for net-caught salmon have been negotiated annually between the Fisheries Association of British Columbia representing the processors and the United Fishermen and Allied Workers Union for its fishermen members, but questions as to the legality of this procedure having been raised, it is being continued only under special legislation exempting it for two years from the provisions of the Combines Investigation Act and Section 411 of the Criminal Code.

Finally, improvement of fishermen's productivity and welfare is related in considerable measure to the extent and effectiveness of government measures to conserve fish stocks and to improve fishing methods and equipment. The nature and form of government administration of the fisheries and the effect have varied greatly from time to time and from one region to another. Responsibility for the commercial fisheries is divided between the federal and provincial governments and, while the federal government has general jurisdiction over the commercial ocean fisheries, except in Quebec, provincial governments control most of the inland fisheries and in all provinces have been involved in various loan, subsidy, regulatory and educational programs in the primary, processing and distribution stages of the industry.

3. Resource Management Programs and Other Government Measures

The necessity for government "management" programs in the fisheries arises out of the nature of the resources. Fish stocks are common property resources, freely available to all under an unrestricted free enterprise system.[2] Because no individual is likely to receive much benefit from his own abstention from fishing or other attempts at conservation, there is a tendency for fish stocks to be over-exploited; there is a resultant depletion of the stocks and, frequently, very low economic returns to many fishermen. Such results in the past have led to the development of a wide range of control over the fisheries by federal and provincial governments and international commissions. Conservation projects and regulations have been most successful when there was general recognition of the need for them and wide-spread public support.

Governments have had to take account of other social welfare needs of the fishing population besides those implied in conservation measures. Fishermen and their families share, of course, in social security benefits such as family allowances and old age pensions that are applicable to all of the Canadian population. Special needs have arisen, however, particularly in isolated regions where productivity is low and alternative employment opportunities scarce, such as Atlantic areas dependent upon the salted fish trade and sections of the fresh-water fish industry on the Prairies. At various times and places, therefore,

1 Messrs. H. J. MacLeod and J. K. Bell, *Proceedings*, Vol. 13, pp. 2079-82.

2 Licences are required for a number of fisheries, both salt and fresh-water. Licence fees are generally nominal and have practically no effect on the numbers engaging in fishing.

assistance to the primary fisheries has been carried out by the government. The forms of assistance include price support action, financing of appropriate vocational training and, on the Atlantic Coast particularly, assisting fishermen and fishing companies by loans and subsidies to improve their boats and gear and methods of fishing. Moreover, governments have assisted also fishermen's co-operative movements.

4. Regional Specializations in Production

In the fisheries, natural and social factors have favoured a considerable degree of specialization in production within geographic areas. Although some 150 species of fish and shellfish are exploited commercially in Canada, about a dozen species account for 85% to 90% of the value of the catch, and not more than three or four of these are of predominant importance in any one region.

An analysis of the value to the fishermen of the 1957 catch by species in each of the main fishing areas is presented in Table 62. The proportion of the 1957 catch of these species consumed in Canada is shown in Column 2 of the table. The figures vary widely from year to year, but the 1957 data may be taken as a rough indication of the relative unimportance of the domestic market in the determination of the gross income of fishermen.

Table 62—Value to Canadian Fishermen of the Total Catch of the Principal Species of Fish and of the Part of the Catch Retained in Canada, by Areas, 1957

Species Group	Canada		Principal Regions			
	Total	Retention for Domestic Use	British Columbia	Maritimes and Quebec	Newfoundland	Fresh-Water Fisheries
			Value in Millions of Dollars			
All Species	94.8	34.1	30.7	37.0	13.6	13.5
Atlantic Cod	15.0	2.3	—	6.3	8.7	—
Haddock	4.2	1.8	—	3.2	1.0	—
Lobsters	14.5	1.7	—	13.4	1.1	—
Salmon	19.9	13.4	18.9	0.5	0.5	—
Halibut	5.8	1.8	3.7	2.0	0.1	—
Whitefish	3.6	0.4[a]	—	—	—	3.6
Pickerel	4.7	0.5[a]	—	—	—	4.7
Herring & Sardines	7.5	1.1	4.9	2.2	0.3	0.1
			Per Cent of Total Value			
All Species	100	36	100	100	100	100
Atlantic Cod	16	15	—	17	64	—
Haddock	4	43	—	9	7	—
Lobsters	15	12	—	36	8	—
Salmon	21	67	62	1	4	—
Halibut	6	31	12	5	1	—
Whitefish	4	10[a]	—	—	—	27
Pickerel	5	10[a]	—	—	—	35
Herring & Sardines	8	15	16	6	2	1

[a]Based on 1956 data.

Only in the case of salmon was more than one-half, by value of the catch, retained in Canada (67%).[1] Next in order were haddock (43%), halibut (31%), Atlantic cod and herring (each 15%), and lobsters (12%). The sales for retention in Canada of all commercial species in 1957 are estimated to represent 36% of the landed value ($34 million out of $95 million.)

5. The Difficulty of Measuring Fishermen's Incomes

Measured by value of output, number of persons employed or investment, the total fisheries industry is relatively small. The gross value of production in the primary fisheries was $115 million compared with a gross value of production of $3 billion from farming for 1958. In the primary fisheries the labour force amounted to perhaps 60 thousand while for farming the total was 728 thousand. But, insofar as the domestic food market is concerned, the fisheries contribution is proportionately even smaller. As we noted in the previous section, a high proportion—about two-thirds by value—of the raw material is represented in exports. In terms of the domestic food market, of the approximately 12.5 million tons of food consumed in Canada in 1958, about 69 thousand tons were fishery products.

The inescapable and significant fact is that the smallness of the overall magnitudes fragmented by important regional differences and the relatively small flow of products into the domestic market make for difficulties in developing statistics of the industry. The cost of further statistical refinement is relatively high.

For these reasons we have not been able to follow an analysis exactly similar in pattern to that presented for agriculture in Part I, "The General Problem and Its Setting". We can approach certain parts of that analysis and in Table 63 and Chart 36 present a comparison of an index of prices received

Table 63—Index Numbers of Retail Prices of Fisheries Products and of Prices Received by Fishermen, Canada (1949=100)

Year	Retail Prices	Fishermen's Prices[a]
1949	100	100
1950	104	114
1951	112	121
1952	113	119
1953	104	110
1954	104	116
1955	108	118
1956	112	135
1957	119	119

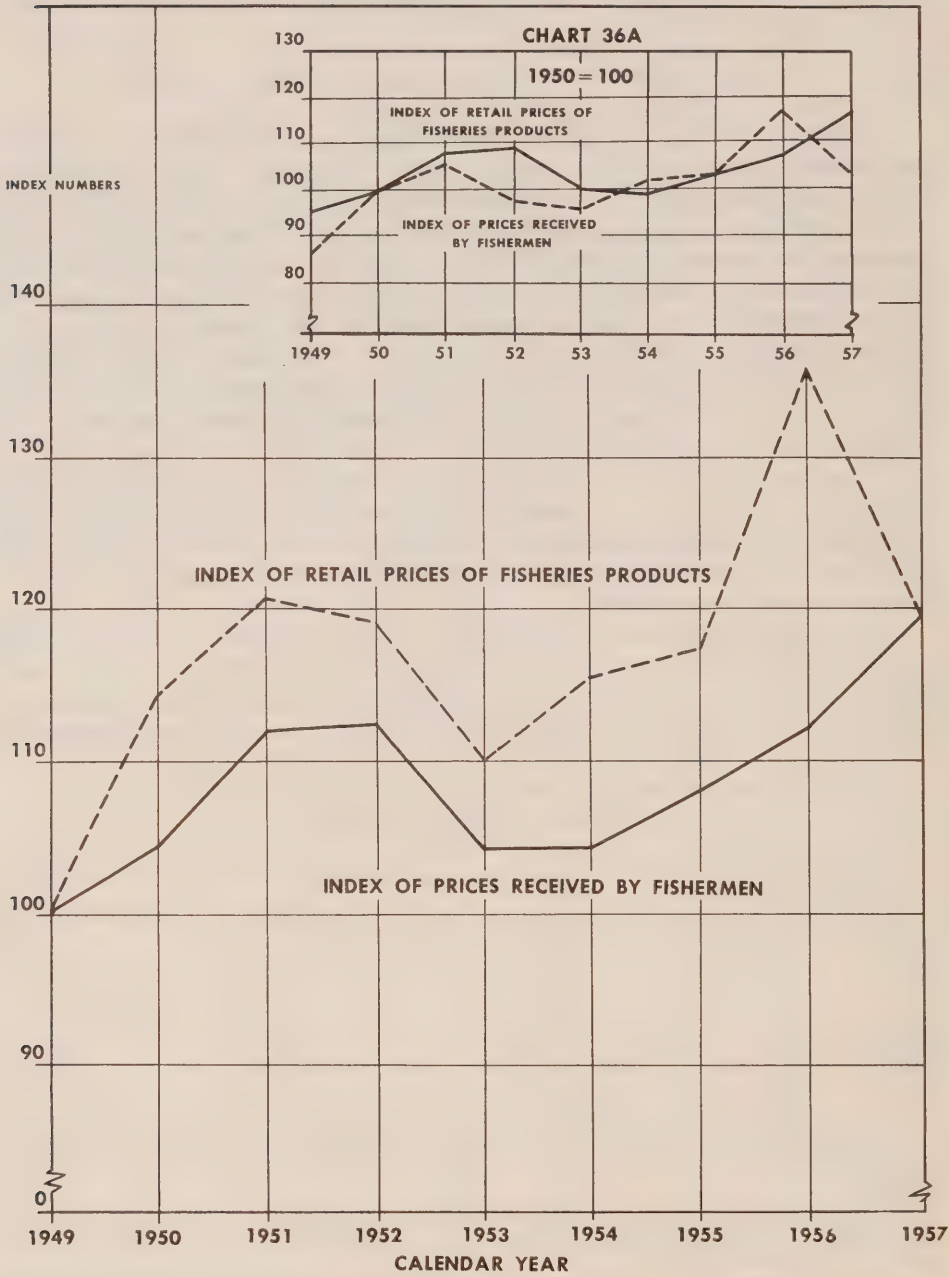
[a]Index of Fishermen's Prices for Canada excluding Newfoundland converted from 1935–39 base by recalculation.

[1] A high proportion of the salmon pack is retained in Canada in small pack-years such as 1956 and 1957. Of the total British Columbia canned salmon pack for the 10 years 1949 to 1958, close to one-half was exported.

CHART 36

INDEX NUMBERS OF RETAIL PRICES OF FISHERIES PRODUCTS AND PRICES RECEIVED BY FISHERMEN IN CANADA, 1949 TO 1957[a]

(1949 = 100)



a-Index of Fishermen's Prices for Canada excluding Newfoundland converted from 1935-39 base

by fishermen and an index of retail prices of fisheries products sold in the domestic market using the 1949 base which we have used in the analysis of the price spreads of farm products. In the fisheries the year 1949 was one of low prices and low output. For this reason we have, in some instances, used a base period other than the year 1949 for the analysis of fishery output and prices.[1] The important conclusion from Chart 36, which is not affected by choice of the base period, is that the data on fishermen's prices and retail prices do not reflect the overall widening of the spread which was so marked in the case of farm products. This shows up clearly in Chart 36A (inset), where the same indexes are shown with 1950=100.

6. Incomes, Investment and Output

We have been unable to trace the changes in the incomes of fishermen over the past 10 years. The only source of statistics from which to compare incomes of fishermen by regions is the 1951/52 Census of the fisheries.[2] From the Census data it is possible to derive the approximate net income per fishing enterprise.[3] The lowest incomes from fishing operations are found in the northern areas of the Prairie Provinces, a substantial part of the salt cod fisheries of Newfoundland, and the fisheries of the Province of Quebec. Generally higher incomes prevail in the Maritime Provinces, and the increase in the numbers of long-liners and draggers in recent years has brought about some improvement in incomes. The larger vessel operations on the Great Lakes, particularly Lake Erie, have afforded better incomes than in most parts of Canada, but fishing yields have suffered and the Lake Erie fishing has gone through difficult times. The highest average incomes are found in the British Columbia fisheries, and these have gained relatively in recent years. While conditions have changed since the Census, we have no evidence that the relative income position of fishermen in different areas has changed drastically.

There are other statistics which indicate changes in productivity and incomes in the primary fisheries. These include data on investment in fishing equipment, and on volume of landings in relation to prices.

The trend of investment in fishing equipment in Canada (excluding Newfoundland) has been upwards both in aggregate amount and in amount per fisherman (Chart 37). The number of fishermen has been declining since 1951, while the value of boats and gear has been increasing. The volume and value of landings have increased.

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1 We have used a five-year base period, 1946-50, for various fisheries statistical series. However, the price data for calculating index numbers of retail prices were not available for the years prior to 1949 and we have, therefore, used the single base year for this purpose.

2 Ninth Census of Canada 1951, Vol. IX *Fisheries,* Queen's Printer, Ottawa, 1954.

3 A few studies scattered over time and regions lend support to the conclusions to be drawn from the Census: e.g., D. R. Buchanan and B. A. Campbell, *The Incomes of Salmon Fishermen in British Columbia, 1953-54,* Economics Service, Department of Fisheries, Ottawa, 1957; *Newfoundland Fisheries Development Committee Report,* St. John's, Newfoundland, 1953; and a series of reports on the operations of long-liners and draggers by John Proskie, Economics Service, Department of Fisheries, Ottawa.

CHART 37

INDEX NUMBERS OF THE VOLUME AND VALUE OF LANDINGS, VALUE OF BOATS AND GEAR, AND NUMBER OF FISHERMEN, BY YEARS, CANADA, 1946 TO 1957[a]

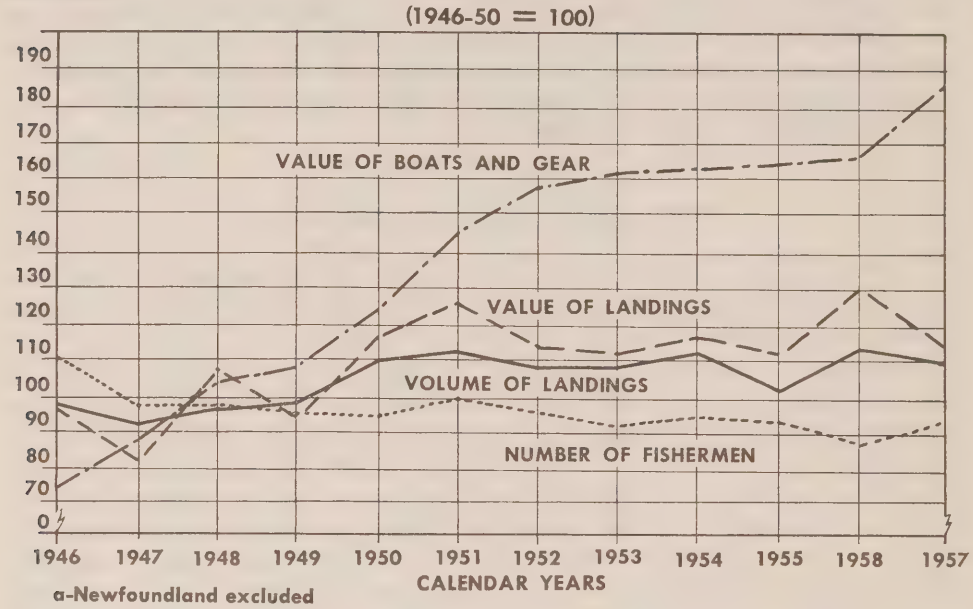


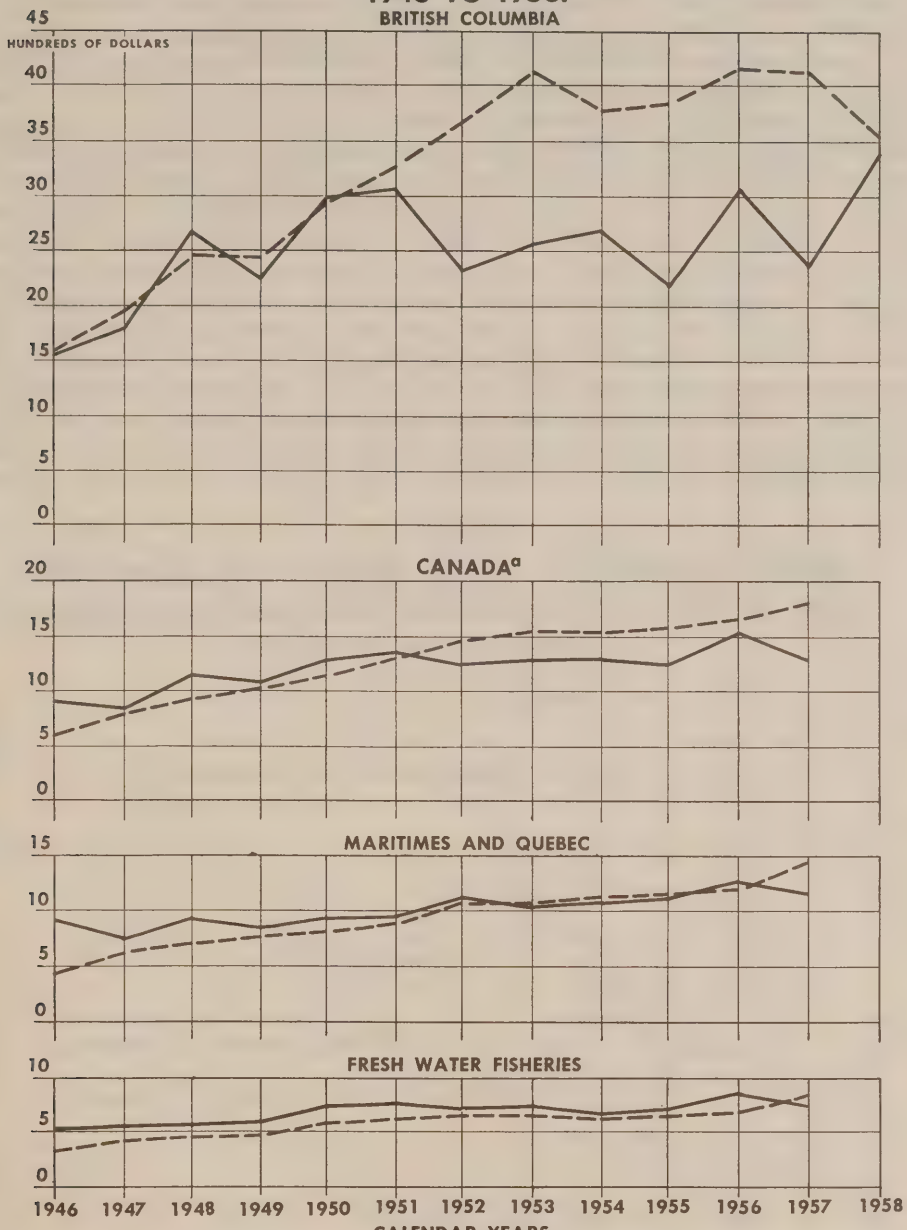
Chart 38 compares the regional values of landings and of boats and gear *per fisherman* in each year, 1946 to 1958. In British Columbia both the value of boats and gear and the value of landings increased from 1946 to 1951; since then the average value of landings per fisherman has levelled out. The increase in investment represents a considerable development of new, larger and faster craft to enable fishermen to get as large as possible a share of the fixed supply in a short-period fishing operation. The levelling out of gross value of output per fisherman is due in part to greater numbers fishing in the later years. In other regions (not including Newfoundland) value of landings per fisherman has moved in step with investment per fisherman, but Chart 38 makes clear the relatively low investment and value of output in the Maritimes, Quebec, and, particularly, in the fresh-water fisheries.

7. Trends in Fishermen's Prices and the Volume of Landings

Although it might be expected that rising fish prices would stimulate fishermen to catch more fish, difficulties in finding the fish, catch restrictions, competition for a limited supply and poor weather adversely affect fishermen's efforts to increase their haul. In a period of rising prices the costs of fishing requisites

CHART 38

VALUE OF INVESTMENT AND VALUE OF LANDINGS: REGIONAL ANNUAL AVERAGES PER FISHERMAN: 1946 TO 1958.



LEGEND ——— Average value per fisherman of landings.

— — — Average value per fisherman of boats and gear.

a-Newfoundland excluded

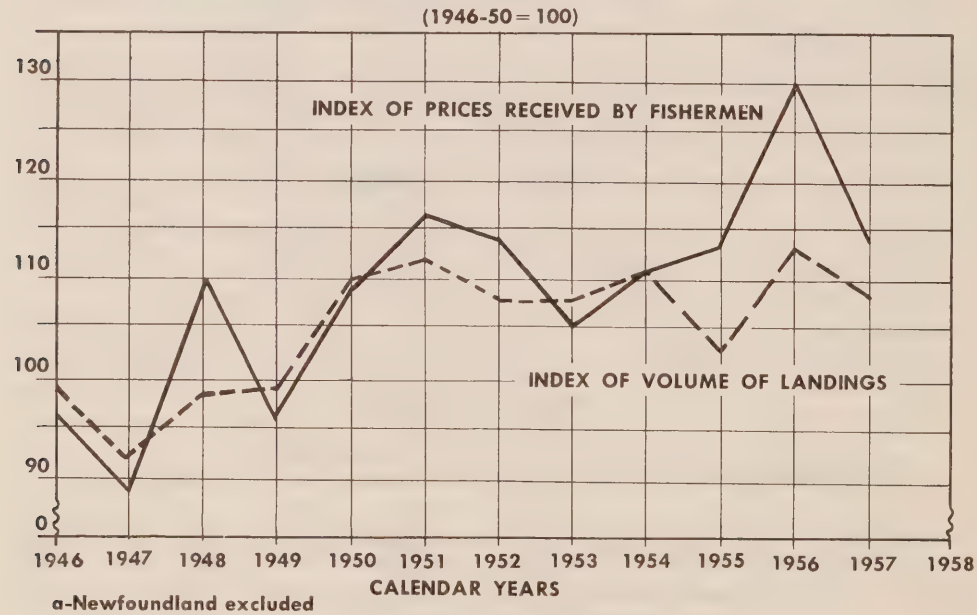
rise also and to an extent the incentive to increase the catch is thereby diminished. Furthermore, average prices may be affected by a wide year-to-year swing in the volume landed of low-valued species, like herring, or of high-valued species, like sockeye salmon. Over a 10-year period, however, some significance attaches to the difference in trend between average prices and average landings.

Index numbers of the annual volume of catch and annual average of fishermen's prices for all of Canada and for three regional fisheries are shown in charts on the following pages. In Chart 39, the indexes for the whole of Canada (except Newfoundland) show a rising trend in the average price per pound received by fishermen, and a tendency for the volume of landings to level after the year 1950.

Trends in prices and landings in the Canadian commercial fisheries are heavily influenced by the high prices realized for species of the British Columbia fisheries as depicted in Chart 40. The trend of annual landings in that province has been relatively stable in comparison with average fish prices. Landings from 1946 to 1958 fluctuated within a maximum of 17 percentage points from the average for the five years 1946-50, and although 1958 was a good year, the catch was, in fact, only 16% higher than in the base period. In the same period the trend in British Columbia fishermen's prices was much more steeply upward. The index on the 1946-50 base averaged 157 for the three years 1956-58. The index of landed prices was 78% higher in 1958 than in 1946-50. The salmon

CHART 39

INDEX NUMBERS OF PRICES RECEIVED BY FISHERMEN AND OF THE VOLUME OF FISH AND SHELLFISH LANDED, CANADA 1946 TO 1957.[a]

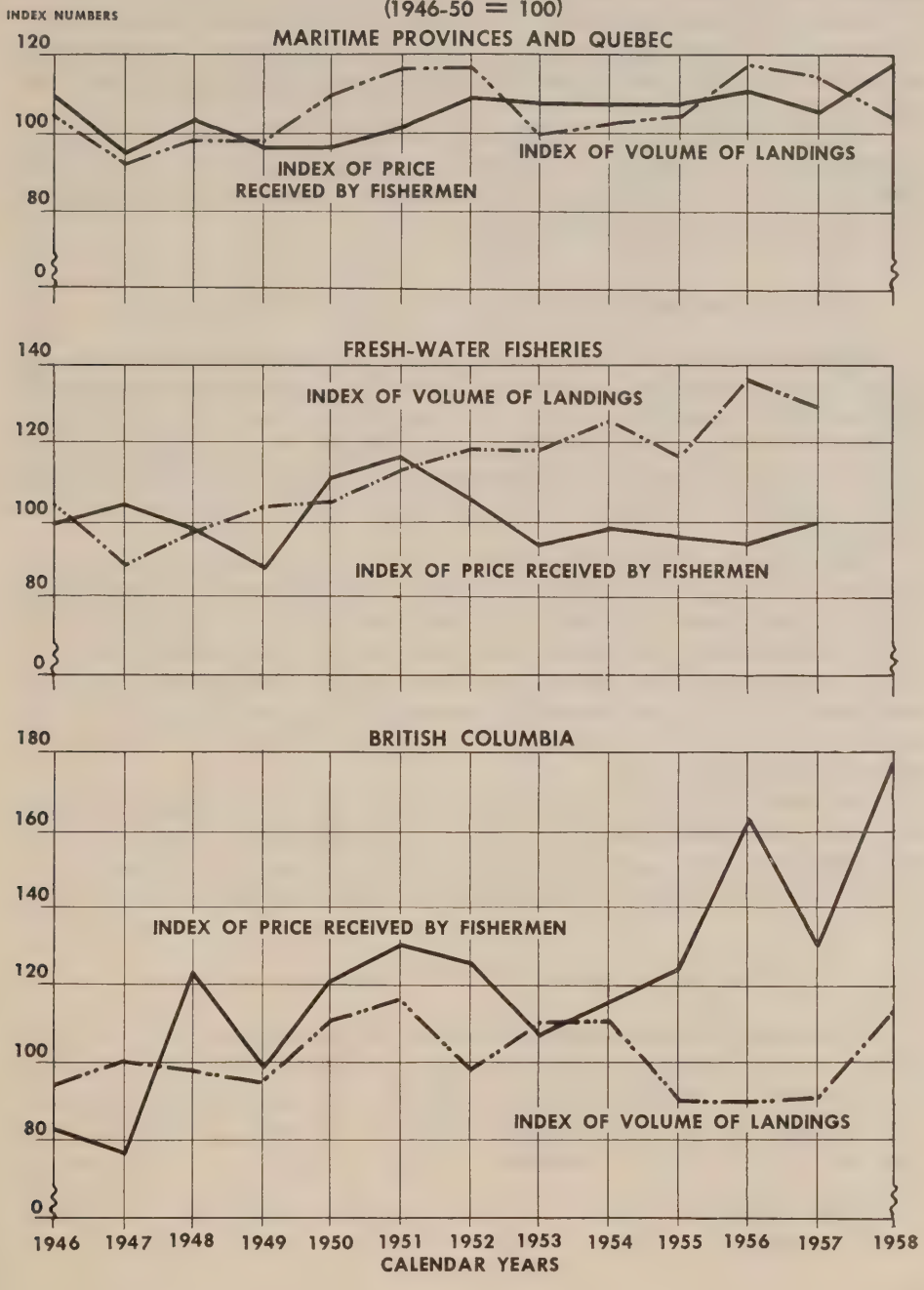


a-Newfoundland excluded

CHART 40

INDEX NUMBERS OF PRICE RECEIVED BY FISHERMAN AND OF THE VOLUME OF FISH AND SHELLFISH LANDED, BY REGIONS, 1946 TO 1958.

(1946-50 = 100)



species are a predominant part of British Columbia fish landings and are in the short run relatively fixed in supply. The proportion of the higher-priced salmons such as sockeye and spring salmon in the total salmon catch varies considerably from year to year and this has an effect on the price index.

In the Maritimes and Quebec, the annual volume of catch has more or less kept pace with a gradually increasing level of average fish prices, as indicated also on Chart 40. For both, the rate of increase over the past decade has been of the order of 12% to 15%.

Average prices realized by Canadian fishermen for fresh-water species are not greatly different now from 10 years ago, although the level did rise in the three years 1950-52. The level of landings did rise gradually over the decade, to 30% above the 1946-50 base for 1957.

8. Investment and Rates of Return in Fish Processing

According to the data we have compiled for seven fish processing companies, they conformed to the general pattern for food wholesaling, retailing and manufacturing corporations (see Part III, Chapter 3, Section 3) of declining rates of return on investment (shareholders' equity) during the period 1949-57. This was in contrast to other food processing (excluding fish processing) companies whose average yearly rate of return on investment showed little change over the nine-year period.[1]

The group of seven fish processors had an average return on investment after taxes of 8.1% for the nine years 1949-57, dividends from subsidiaries being included in the returns. This was about the same as the average rate of return (8.4%) for other food processing,[2] but over the period the annual averages of return on investment for the fish processing group have varied widely. The shareholders' equity in the seven fish processing companies increased by 34% between 1949 and 1957, compared to an average increase of 71.6% for the other food processing groups.[3]

The averages conceal a considerable diversity in rates of return on investment among the different firms and from year to year over th nine-year period. Some individual firms, particularly on the east coast, had rates of return (and increases in shareholders' equity) much higher than the averages here recorded.

9. The Marketing Bill for Fish Consumed in Canada

An estimate of the marketing bill for fish and shellfish consumed in Canada indicates a 42% increase between 1949 and 1957 in the value to the fishermen of fish products consumed in Canada while the retail value increased by 68% over the same period. The "price spread", the difference between the retail value and the value to the fishermen, increased by 99%. The volume of fish

[1] Part III, Table 16.
[2] *Ibid.*
[3] Part III, Table 17.

marketed for domestic consumption increased by 35%.[1] From this we estimate that marketing costs per unit of fish marketed increased 47%, as a result of a 24% increase in the amount of services and a 19% increase in the price of a unit of marketing service.[2] Table 64 shows the estimates of the marketing bill for the period 1949 to 1957.

Table 64—Retail Value, Fisherman's Value and Marketing Bill for Fish Food Products Landed and Consumed in Canada, 1949 to 1957

Year	Retail Value	Fisherman's Value	Marketing Bill	Fisherman's Value as % of Retail Value
		($ million)		
1949	43.3	23.9	19.4	55.2
1950	49.7	27.9	21.8	56.1
1951	55.4	29.7	25.7	53.6
1952	58.9	28.4	30.5	48.2
1953	60.0	28.1	31.9	46.8
1954	62.0	29.1	32.9	46.9
1955	65.6	28.3	37.3	43.1
1956	63.8	31.6	32.2	49.5
1957	72.7	34.1	38.6	46.9

[1] This includes the effect of the shift to higher priced commodities.
[2] The methods of computation used were those detailed in the footnotes to Chapter 3 in Part IV.

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CHAPTER 2

REGIONAL SITUATIONS AND PROBLEMS

1. British Columbia Fisheries

Principal Species and Products

The five Pacific salmon species,[1] halibut, and herring are the most important species in the British Columbia fisheries; during the decade 1949 to 1958, salmon represented 66% of the value of British Columbia landings, herring 14% and halibut 11%. Halibut and salmon are superior, comparatively high-priced food fish; herring are small, low-priced fish caught in large volume and used mainly on the Pacific Coast for reduction into fish meal and oil.

The salmon species represent close to one-quarter of the value of all Canadian commercial landings. The proportion of the salmon catch retained for consumption in Canada is high in comparison with other fish species. Among Canadian food fish the salmon ranks first in its importance to fishermen's incomes and in its share of Canadian consumer expenditures on fish.

Practically all sockeye and pink salmon are canned. The other three species and steelhead trout are also canned but a considerable part of the catch is marketed in fresh and frozen forms, lesser amounts being put into mild-cured, smoked and dry-salted forms. Halibut is marketed in fresh and frozen dressed and filleted forms.

Restricted Supply

The flavour and other quality characteristics of salmon and halibut have been basically responsible for the demand for their products but another important factor maintaining their prices at relatively high levels has been the restricted supply. The annual catch of each species is limited in the interest of conservation by federal government "management" and by joint Canada-United States control commissions in waters outside national jurisdiction. The opening dates for halibut fishing and catch quotas for each area are set by the International Pacific Halibut Commission, and the season is closed when the quota is taken. Exploitation of Canadian salmon stocks in the ocean is prevented by agreement among Canada, the United States and Japan under the International Convention for the High Seas Fisheries of the North Pacific Ocean; salmon fishing is restricted to the periods when the spawning runs to the Fraser and other coastal rivers takes place. The number of salmon caught is dependent primarily upon the size of the spawning runs; spawning escapement from each run is managed by enforcing periodic closures of fishing and by restrictions on the use

[1] The five species are sockeye, pink, chum or keta, coho and spring salmon. The steelhead trout is usually grouped with the salmon species, being similar in appearance and habits to the Atlantic salmon.

of certain types of fishing gear. In international waters, the fishing of sockeye and pink salmon runs is controlled by the International Pacific Salmon Commission to provide for an approximately equal division of the catch between Canadian and United States fishermen as well as for the requisite spawning escapement.

High Production Costs

The increase in the prices of boats, gear, fuel and other supplies that fishermen must buy has been part of the general rise in the price level. Offsetting these increased costs, investment in more efficient boats and gear has tended to increase fishermen's productivity. Investment in such modern equipment has been particularly necessary in British Columbia because industrial wage levels are higher and employment opportunities more plentiful there than in the other major fishing areas. A high level of catch returns, therefore, has been necessary in British Columbia to counteract the tendency of fishermen to move into other industries if their returns from fishing fall below those in other occupations.[1]

Capital investment in the industry has also been stimulated by catch quotas and the short fishing seasons: competition among fishermen for a larger share of the catch has resulted in heavy investment in new and better boats and gear. This effort has been to a considerable degree self-defeating insofar as net gains in productivity for the industry are concerned: the increased number and efficiency of catching units has tended to reduce still further the length of time in which the limited catch is taken, and heavier landings by the newer, more modern boats have been at least in part at the expense of landings by older, less efficient units. Adaptation of boats for use in more than one fishery has served to lengthen the fishing season for such boats and their crews, but additional costs are involved. Furthermore, diversified or multi-purpose boats may be somewhat less efficient in any one fishery than a single-purpose boat.

A more complete analysis of the situation would take account of other relevant considerations such as the degree to which the various fisheries are complementary, the competition of fishermen of other nations, and the extent of off-season employment opportunities for fishermen. However, from the standpoint of the national economic interest, the British Columbia fishing industry is overcapitalized because the annual catch could be taken with a much smaller quantity of boats and gear. Despite the increased efficiency of modern fishing equipment and despite the high net incomes gained by some skilled or lucky fishermen in some seasons, British Columbia fishermen are faced with high average fixed costs of production and they are, in consequence, extremely vulnerable to such eventualities as a poor season's catch or falling fish prices.

The high fixed cost structure in the industry tends to add to the inflexibility of supply imposed by limited stocks and conservation management. Should the market demand for salmon or halibut weaken, no considerable immediate decline in fishing effort is likely to result, so long as some part of the heavy capital costs, over and above current operating expenses, can be recovered by continued fishing.

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1 According to the annual number of fishing licenses issued in the province, there has been no considerable change in the number of fishermen in British Columbia since 1950, apart from annual fluctuations of as much as 10% of the total. The numbers have averaged higher since 1950 than in the immediate postwar years.

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Seasonal production also involves higher processing, storage and marketing costs. The fishing companies in competition for raw fish supplies tend to provide sufficient capacity to handle the peak landings in the best fishing years—capacity to process in a few weeks the entire year's production, with plant and equipment necessarily idle or only partially used at other times of the year. Freezing capacity can be used, of course, for processing different species of fish throughout the various fishing seasons, but salmon canneries are highly specialized and only two or three operate on tuna, clams, oysters or herring for limited periods during the closed season for salmon.

Marketing Structure

The heavy capital cost of the modern canning and freezing equipment necessary to achieve the economies of large-scale production has led to concentration of processing activities. The number of salmon canneries in British Columbia was about 100 at the close of World War I; it is now 19, with ownership confined to an even smaller number of companies. British Columbia Packers, Canadian Fishing Company, Nelson Brothers and Anglo-British Columbia Company account for most of the British Columbia pack of canned salmon and, along with the Prince Rupert Fishermen's Co-operative Association, for the greater part of the frozen fish output.

This dominance of the secondary industry by a few large companies developed gradually and was largely completed before the beginning of the last decade, taking place through "horizontal" integration as companies grew by taking over other processing operations and through "vertical" integration as they invested in fishing fleets, net lofts and even shipyards, and extended their marketing activities into wholesaling. Production cost economies were not the sole reason, however, for the growth of these companies. Probably a modern plant with a few high-speed canning lines could achieve near-to-maximum economies of scale, and little could be gained by making the plant still larger, but various marketing economies and other advantages are available only to the larger diversified enterprises. Among these, as we have mentioned elsewhere in the report, is specialization of management for production, sales, and cost accounting. Sales economies are obtained by firms able to offer a full line of fish products and by-products; with adequate volume, the firm may be able to establish branch offices to service important markets, build up advertising and brand promotion programs, keep their products on retail shelves and spread these costs over a large number and volume of products. Furthermore, the firm that is able to provide boats and gear, and camp and packer services to fishermen is thus enabled to ensure itself a more dependable supply of raw fish.

To some extent the advantages obtainable by the large fishing companies are those attributable to monopoly power in buying labour services and raw fish and in marketing the products, although the existence of price leadership or tacit agreement in the pricing of fish products, allocation of markets, or other concerted action characteristic of an oligopoly is difficult to establish. The fishing companies have strengthened their position by membership in the Fisheries Asso-

ciation of British Columbia, which has been the bargaining agent vis-à-vis the fishermen's and shore-workers' organizations in determining the minimum season prices to be paid for net-caught salmon and the wage rates for company employees ashore and afloat. The Association also has carried out certain arrangements from time to time in connection with United Kingdom contracts for the purchase of canned salmon.

A strong organization, the United Fishermen and Allied Workers Union, representing both fishermen and shore-workers, has been negotiating prices for several years on purse-seine and gill-net caught salmon. Other unions, the Native Brotherhood of British Columbia and the Deep Sea Fishermen's Union of Prince Rupert, have been associated with the United Fishermen and Allied Workers Union in its negotiations.

Contracts are negotiated annually to establish the minimum prices to be paid to purse-seine and gill-net fishermen for the different salmon species, round weight basis. Scarcity of fish or a heavy demand by the fresh and frozen trade may raise the price above the minimum at times. Troll-caught salmon are not included in the contract; they are usually landed dressed and destined for the fresh and frozen market and consequently bring higher prices.

The greater part of the halibut not handled by the Fishermen's Co-operative Association is sold at auction. The skipper reports his "fare" or "trip" on the way into port and it is offered for sale on the halibut exchange. A seat on the exchange is necessary to take part in the bidding, and eight or ten buyers (fishing companies) are represented. However, the Co-operative offers an alternative method of selling fish if auction prices are considered unsatisfactory, and United States ports provide an alternative market to help keep the auction competitive.[1]

The processors sell to wholesalers, chain stores and foreign buyers either directly or through commission agents or brokers. Some fishing companies do their own wholesaling in certain areas and British Columbia Packers maintains its own sales offices in principal marketing centres. The Prince Rupert Fishermen's Co-operative Association has as its sales agency in Canada, the Fishermen's Co-operative Federation of Prince Rupert, and in the United States, Fishermen's Federation Inc. Part of its output is marketed in retail co-operative stores under co-operative brand names.

Processors' quotations on canned salmon and usually on fresh and frozen sales are free-on-board British Columbia plant or warehouse. The bulk of sales are carload lots, shipped on order. To an increasing extent, stocks are being held in storage in key centres to provide more satisfactory service to customers.

The foregoing has dealt with the general and regional characteristics of the British Columbia fishing industry. The two species we have selected for special study—canned sockeye salmon and Pacific halibut—were chosen because they are important to Canadian consumers and to British Columbia fishermen as well. A resume of our findings with respect to these commodities follows.

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1 British Columbia fishermen during the past five years landed on the average about one-eighth of their halibut catch in United States ports.

Canned Sockeye Salmon

Sockeye is the most valuable of the salmon species to the industry: it represented one-fifth by weight and one-third by value of the total British Columbia salmon catch during the decade 1949 to 1958. The average annual Canadian pack of canned sockeye during the same period was 461 thousand cases—29% of the average of all salmon species. These figures are heavily weighted by the phenomenal production of 1958. The 1958 sockeye pack was over a million cases—almost equal to the record pack of 1905.

The consumption in Canada of canned sockeye is currently about one pound per person per year, compared with slightly more than two-and-a-half pounds of canned salmon of all species. On the average somewhat less than one-third of the Canadian sockeye pack is exported.

Sockeye salmon are taken from late May into November. July, August and occasionally September are the months of heaviest catch. Usually three-quarters of the Canadian sockeye catch is taken with gill nets and almost all of the remainder with purse-seines, but seine gear accounted for more than one-half of the 1958 landings. Most sockeye fishermen deliver to company packer or collector boats on the fishing grounds, settlement being effected on a "round weight" (as caught) basis, usually at the contract minimum price for the season. The settlement with the fisherman may be a payment in cash (or by cheque) or it may take the form of a credit entry in the company's books. Within each species grades are established for the salmon. These are set out in the documents resulting from the negotiating processes between fishermen and buying firms. The grades are defined with respect to weight and the general appearance and condition of the fish. It is a matter for negotiation between fisherman and buyer to effect a satisfactory agreement on the grade determinations of each sale. Ordinarily the packer carries no ice, but ice or chilled sea water tanks are used at the cannery if the fish have to be held several days before processing.

Salmon is packed in tins containing 15½ ounces, 7¾ ounces and 3¾ ounces of salmon, minimum net weight—called "ones" or "talls", "halves" and "quarters" respectively. The pack is measured in standard 48-pound cases—the equivalent of 48 "ones", 96 "halves" or 192 "quarters". All canned salmon, whether imported or produced in Canada, must be inspected under the Canadian *Meat and Canned Foods Act,* Grade A quality being identified by the word "Canada" embossed on the top of the can. If a shipment is found by the government laboratory to be sound, wholesome and fit for human food, but not qualified for a certificate as Grade A salmon, an additional cover embossed "Grade B" must be cemented over the end of each can on which "Canada" is embossed. Grade A canned salmon may be labelled "Fancy", "Choice" or "Standard" or any similar designation, and there may be a considerable range in quality within the Grade A classification. The larger processing companies are able to sell salmon at the lower end of the "A" quality classification under minor labels, in some markets. This has put small firms at a disadvantage in obtaining or maintaining a share in the domestic market.

The raw material requirements for a 48-pound case of canned sockeye are from 68 to 70 pounds of sockeye, "round" or landed weight. Since almost all

of the sockeye is canned and since year-to-year changes in the conversion rate are likely to be small, statistics on the yearly average value per pound of sockeye landed in British Columbia provide a reliable basis for estimating the yearly raw material cost per standard case. We have used these pack-year average cost figures along with monthly averages of wholesale and retail price quotations for Grade A sockeye in Vancouver to compute annual fishermen-retail price spread estimates as shown in Table 65. (Also see Chart 41.)

These values are only approximate because of the inaccuracy of unweighted annual retail and wholesale price figures obtained from the monthly quotations. It has been even more difficult to compile statistics adequate for the computation of processors' and wholesalers' margins. Processors, season-opening quotations on sockeye f.o.b. plant or warehouse in British Columbia were usually $33.00 per standard case of 96 "halves" through the years 1949 to 1955, excepting for the pack-year 1951/52, when they were as high as $38.00, and the year 1953/54, when they were as low as $30.00. In more recent years, the packers' season-opening quotations have been around $38.00 to $39.00 per standard case. The data are accurate enough to indicate trends in processors' and wholesalers' margins over the past decade, as set out for alternate pack-years over the period 1950/51 to 1953-59 in Table 66.

Evidently, as the retail price rose during the decade, the fishermen's receipts and the combined wholesale-retail marketing margin increased. The packers' per cent of the retail value decreased during the decade, but in absolute terms it was at about the same level, $19.00 to $20.00 per case, at the end of the decade as at the beginning. During the past three years the packers' and fishermen's shares have been equal at 40% to 41% of the retail value, representing $19.00 to $19.50 per standard case of sockeye.

Table 65—Summary of Fisherman-Retail Spread on Cannd Sockeye Salmon, 1949/50 to 1958/59[a]

Pack-Year July 1–June 30	Vancouver Retail Price	Retail Equivalent Value Canned per lb. of Sockeye as Landed	Vancouver Wholesale Value of Canned per lb. of Raw Sockeye	Average landed Price of Sockeye	Fishermen-Retail Spread	Retailers' Share of Retail Value	Fishermen's Share of Retail Value
	(¢/½-lb. tin)	(¢)	(¢)	(¢/lb.)	(¢)	(%)	(%)
1949/50	39.0	53.5	51.8	18.0[b]	35.5	3	34
1950/51	39.0	53.5	51.4	20.1	33.4	4	38
1951/52	45.0	61.5	58.5	25.0[b]	36.5	5	41
1952/53	41.5	57.0	50.7	25.0[b]	32.0	10	44
1953/54	39.0	53.5	46.5	22.0[b]	31.5	13	41
1954/55	39.5	54.0	48.6	22.1	31.9	10	41
1955/56	47.8	65.5	57.8	24.1	41.4	12	37
1956/57	49.3	67.5	61.4	27.6	39.9	9	41
1957/58	49.5	68.0	60.8	28.2	39.8	10	41
1958/59	49.5	68.0	60.6	28.0[b]	40.0	11	41

[a] Adapted from price spread study of canned sockeye salmon in Volume III where a fuller explanation of procedure, etc. is given.
[b] Season minimum contract price.

CHART 41

RAW MATERIAL COST AND AVERAGE MONTHLY WHOLESALE AND RETAIL PRICES AT VANCOUVER OF CANNED SOCKEYE SALMON PER CASE OF 96 HALFPOUND TINS, 1949 TO 1958.

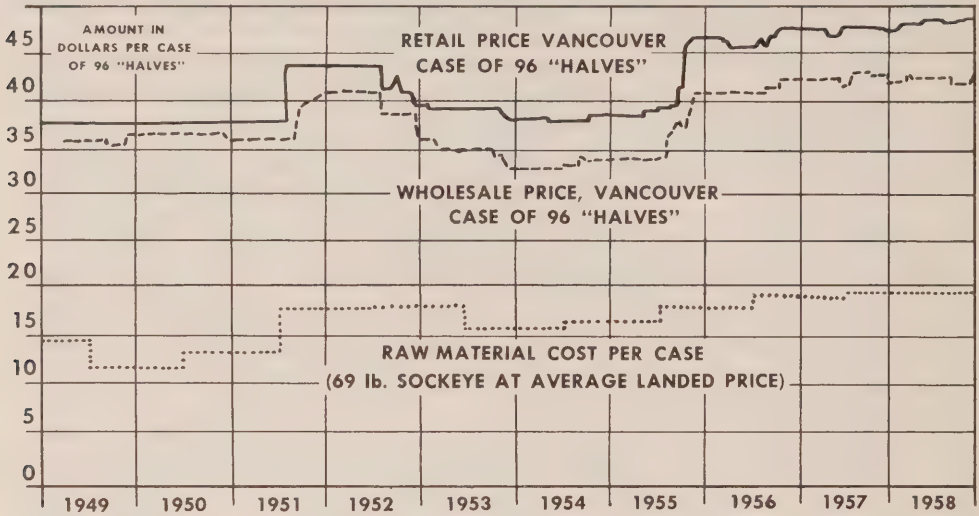

Table 66—Marketing Margins for British Columbia Canned Sockeye Salmon, Alternate Pack-Years 1950/51 to 1958/59

	1950/51	1952/53	1954/55	1956/57	1958/59
Dollars per Standard Case of 96 "Halves":					
1. Raw Salmon 69–70 lb. Price to Fishermen	$14.00	$17.25	$15.25	$19.00	$19.50
2. Processors' Margin	19.00	15.75	17.25	19.50	19.50
3. Wholesalers' Margin	3.00	2.50	1.75	4.50	3.50
4. Retailers' Margin	1.45	3.85	3.75	4.00	5.00
Total—Retail Value	$37.45	$39.35	$38.00	$47.00	$47.50
Per Cent Share of Retail Value:					
1. Fishermen's	37	43½	40	40½	41
2. Processors'	51	40	45	41½	41
3. Wholesalers'	8	6½	5	9½	7½
4. Retailers'	4	10	10	8½	10½
Total—Retail Value	100	100	100	100	100

It is apparent that, while the fishermen's price or raw material cost per case of sockeye has increased by about 50% during the decade, the cost of fishing equipment and the fishermen's "opportunity cost" have risen also. Processing costs also have been affected by rising wage rates and rising prices for tinplate and other materials, which are estimated to have increased each by about two-thirds over the decade. However, indications are that investment in modern high speed canning and other equipment has so increased the output per worker that

the effect of rising wage rates on unit costs of production has been largely offset. Nevertheless, as a result of the heavy capital investment in processing plant and equipment, fixed costs are high, making unit production costs particularly susceptible to changes in the volume of production. In small pack-years, the processors' financial statements may reflect losses but, conversely, in years of heavy salmon runs their unit costs of production should be greatly reduced, and good rates of profit realized.

Salmon oil and fish meal are processed from the offal or waste. Inasmuch as 68 to 70 pounds of raw sockeye are required per 48-pound case, the offal yield is more than 20 pounds per case. We have not attempted to place an exact value on the by-products obtained from this amount of offal, but it would be at present less than 50 cents. Consequently, the net yield per case from the by-products, after allowing for their processing costs, would be very small.[1]

It is common practice in the industry when heavy production years occur to carry over stocks into the following year in order to lessen the pressure of supplies on price and to maintain a continuous supply of the packers' branded products in Canadian retail stores, as well as to ensure at least minimum shipments to traditional export markets. The cost of holding sockeye salmon might well amount to $2.50 per case per year, counting storage, insurance and interest on inventory value. This cost needs to be set against the lower unit production cost of a heavy pack-year.

Packers' quotations are now made f.o.b. Pacific Coast. Consequently, Toronto or Montreal wholesale prices should be higher than Vancouver wholesale prices by at least the amount of the freight cost. The agreed freight rate on canned fish, boxed, from British Columbia to various Ontario and Quebec cities has been, since September, 1953, $2.00 per 100 pounds, minimum carloads of 60 thousand pounds. This represents a differential between Vancouver and Toronto or Montreal of about $1.00 a standard case or one cent on a half-pound tin of sockeye. Since the middle of 1953, wholesale sockeye price quotations in eastern Canadian cities usually have been higher than those in Vancouver by at least the amount of freight charges. In earlier years this was not always the case; Toronto wholesale prices were for some considerable periods often below those for Vancouver.

A witness stated at the Vancouver hearings that, in four out of 10 years, the retail price in Vancouver was equal to or greater than the retail price in Toronto.[2] According to the averages of monthly retail prices of canned sockeye as reported by the Dominion Bureau of Statistics, the Vancouver retail price was greater than in Toronto through most of the period from August, 1952, until early 1957. Montreal retail prices were usually above the corresponding Toronto quotations and only occasionally below the Vancouver retail price. Short-period discrepancies could be explained by lags in adjustment at Toronto to price changes at the Pacific Coast, but because Toronto wholesale prices after

[1] While there are considerable variations in yields obtained from offal, it appears that on the average one ton of offal yields about 340 lb. of meal and 18 gallons of oil. Fish meal is worth about $125 a ton and fish oil for industrial uses perhaps 75 cents a gallon.

[2] See brief by Mr. Homer Stevens, *Proceedings*, Vol. 3, p. 406.

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1953 were usually above those at Vancouver, by process of elimination we are inclined to the view that the lower retail prices at Toronto than at Vancouver resulted from lower retail markups in the Toronto stores.

Pacific Halibut

Halibut are large flatfish, caught mainly with line-gear on the continental shelf from the Strait of Juan de Fuca to the Bering Sea. Canadian fishermen over the period 1949 to 1958 landed an average of 22 million pounds a year in British Columbia ports, and since 1953 more than two million pounds a year in United States ports. Canadian fishermen accounted for 39% of the combined Canadian-American catch of halibut over the past 10 years and have increased their share of the catch from about one-third 10 years ago to 45% in 1958.

Another species of halibut is caught on Canada's Atlantic Coast but British Columbia landings are preponderant and represent 80% to 85% of the total Canadian catch.

About two-thirds of the British Columbia catch is landed in the Prince Rupert area, and the balance farther south at Vancouver Island and mainland points. The halibut season extends from April into October as various areas are opened for fishing until their quota is taken, but the bulk of the catch is taken in four or five months; the fishing companies and the Prince Rupert Co-operative together receive and process landings of as much as eight or nine million pounds of halibut a month in May and June, followed by heavy but somewhat smaller quantities in the two or three succeeding months as quotas are filled and some of the boats shift into salmon fishing.[1]

Halibut are gutted when caught and beheaded before they are weighed in at the wharf. The grading system is established by the members of the exchange and is maintained on a uniform basis from year to year. "Large" halibut are those over 60 pounds in weight; "Medium" 10 to 60 pounds; "Chicken" under 10 pounds; and "No. 2", grey or damaged fish. "Medium" and "Large" comprise 85% to 90% of the catch. "No. 2" and "Chix" in 1958 at Prince Rupert brought five to seven cents a pound less than "Medium", and the price of "Large" was usually close to that of "Medium"—sometimes even lower. The average value of all halibut landings in British Columbia in 1958 was 20.7 cents a pound.

The auction system for purchase of halibut, to which we made references earlier, is unique in the Canadian raw fish marketing system. The skipper hails his catch to the exchange. He is able to do this because he can identify grades and quality, and bidders on the exchange can usually make intelligent appraisals of the value of the fish based upon their knowledge of fishing areas and of the skipper's ability to bring his catch to shore in good condition. The auction system and the operations of the exchange have brought a high degree of rationalization to the selling of the raw material. Prices are established and the grading system

[1] The halibut season in Area 2—from Willapa Bay off the coast of Washington to Cape Spencer in Alaska—was open from May 4 to July 2 in 1958 and again for seven days from August 31 to September 7. This is the area in which the British Columbia small boat or "mosquito" fleet operates.

makes possible an identification of the variations in the fish by weight and quality related to their ultimate values in the retail market. We have noted that halibut skippers appear to be satisfied with the general results of this system.

About two-thirds of the Canadian halibut catch, including landings by Canadian fishing boats in United States ports, is exported. We estimate the retention of Pacific halibut for consumption in Canada to have been about 8.5 million pounds a year, landed weight basis, over the nine-year period 1950-58—an average per capita domestic disappearance of less than three-fifths of a pound a year, or about one-third of a pound in terms of edible weight.

Halibut requires little processing except freezing; although there has been some increase in the amount of filleting, steaking and packaging done by the fishing companies, most of this is done at the retail, and to some extent at the wholesale, level. During the six years 1952 to 1957, two-thirds of the Pacific halibut was sold by processors in the frozen (headless) dressed form, and about one-sixth as fresh dressed. Frozen halibut fillets represented about 10% of landings; the production of frozen flitches and pieces gradually increased until it was equal to that of frozen fillets.

Halibut is the species usually used in fish-and-chips dinners and it is also a frequent item on restaurant menus. The requirements of this trade for fillets, steaks and portion packs may well have increased the amount of processing done by wholesalers and the fishing companies. The yield in filleting dressed halibut is 59% to 60% and in cutting steaks, according to various estimates, from 63% to 78%; consequently waste is an important element in the markup at any level at which the processing takes place[1].

The cost of transportation from Vancouver or Prince Rupert to Toronto or Montreal ranges from about two-and-a-half cents a pound via the largest (60 thousand pound) refrigerated freight cars to seven cents or more by carload express. The monthly wholesale quotations for dressed halibut at Toronto have consistently exceeded those at Vancouver by more than the maximum freight costs.

In Table 67, the retail value of halibut steaks at Toronto[2] equivalent to a pound of halibut as landed in British Columbia is computed as being the retail value of three-quarters of a pound of steaks. This involves an arbitrary assumption that the yield in steaks from dressed halibut is 75%. By this method, the fishermen's average price for the year or the wholesale price for dressed halibut can be substracted directly from the computed retail value to determine the price spread, and the cost of waste in steaking is eliminated from the comparison.

According to these data, year-to-year changes in the Toronto retail price and in the retailers' margin have not been as great as those in fishermen's average prices. The fishermen's share of the (Toronto) retail dollar has averaged slightly more than one-third, with quite wide variations either way. The retailers' share has been in the neighbourhood of 25%.

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1 The heads are removed by the fishermen at the wharf before the fish are weighed in. Consequently, this offal represents no cost to the buyer, although ordinarily it is used for fish meal production.

2 Toronto retail prices are used because a complete series for Vancouver is not available.

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Fresh halibut steaks retail at prices considerably above those of frozen steaks. Frozen fillets, too, retail at higher prices, reflecting in part the waste and processing cost in filleting; chicken halibut are filleted at a lower raw material cost, medium halibut up to 40 pounds in size being used only to the extent that the demand for fillets requires. The cost of freezing halibut, including a small weight loss of perhaps 2%, would be near to four cents a pound. The cost of storage for a year would be perhaps 2½ cents a pound; storage costs in total are considerable, because of the necessity to hold a large share of production up to a year before final sale.

Table 67—Summary of Fisherman-Retail Spread Frozen Halibut Steaks, 1950 to 1958[a]

Year	Average Retail Price Frozen Halibut Steaks at Toronto	Retail Equivalent Value for Steaks per lb. of Halibut Landed Weight	Toronto Wholesale Price Frozen Dressed Halibut	Average Landed Price for B.C. Halibut	Fishermen –Retail Spread	Retailers' Share of Retail Value	Fishermen's Share of Retail Value
	(¢/lb.)	(¢)	(¢/lb.)	(¢/lb.)	(¢)	(%)	(%)
1950	59.7	44.8	39.2	20.3	24.5	12	45
1951	68.6	51.5	42.4	17.0	34.5	18	33
1952	68.9	51.7	38.9	16.8	34.9	25	32
1953	66.2	49.6	35.3	14.7	34.9	29	30
1954	64.6	48.5	34.4	15.8	32.7	29	33
1955	61.9	46.5	31.7	13.0	31.5	32	28
1956	67.8	50.8	39.6	21.7	29.1	22	43
1957	70.6	53.0	39.4	16.3	36.7	26	31
1958	71.8	53.8	38.6	20.7	33.1	28	38

[a] Adapted from price spread study of frozen halibut steaks in Volume III where a fuller explanation of procedure, etc. is given.

2. The Atlantic Coast Fisheries

Principal Species and Products

On the Atlantic Coast, lobsters and various groundfish species, particularly cod and haddock, are the mainstay of the fisheries and are likewise among the most important of the fisheries products consumed in Canada. (See Table 62.) Herring and sardines (small herring) are caught in quantity in some localities, but the products—smoked, pickled and canned—are chiefly for export. Lobsters are sold alive or processed into canned, fresh (chilled), or frozen meat. Dried salted cod is produced for export, but the industry's largest market is now that for fresh and frozen fillets of cod, haddock, redfish (ocean perch), small flatfish such as plaice and various members of the flounder family (all marketed as "sole"), and a few other groundfish species. A considerable volume of cod and haddock fillets is processed into frozen blocks for later conversion into breaded fish sticks, cooked or uncooked, and re-frozen.

Conditions of Production

A great many Atlantic fishermen are "inshore" or small-boat fishermen, whose craft are too small to fish in rough weather or to venture more than a day or two from shore.[1] (The traditional method of "offshore" fishing was also a small-boat operation: the fisherman sat in a dory and fished with a hand-line, returning to a mother ship, a large schooner or "banker", at night with his catch, which was then split and salted down, to be dried later on shore.) The incomes of such fishermen are low, particularly in the salted cod fishery of Newfoundland and the Gulf of St. Lawrence, because of a limited catch per man and because salted cod usually has been a low-valued product. Inshore fishermen within reach of a filleting plant have an assured market for their catch, but such plants have to place their main dependence upon large trawlers or draggers in order to obtain an adequate year-round volume and variety of supply. A great many inshore fishermen engage in the lobster fishery, but although lobsters are a relatively high-valued species, the average net return to the fishermen is small because of the large number competing for a share of the limited catch, the cost of lines and traps, and the risk of loss or damage to gear from storms.

In some areas, of course, the inshore fisherman combines fishing with farming, woods work, or other occupations. Too often productivity is low in each occupation, with fishing still the main or surest source of income.

Modern draggers or trawlers and long-liners make possible a much greater volume of catch per fisherman and also offer a less arduous and dangerous existence than line-fishing from small craft. But they require a large concentration of capital—an investment per fisherman of up to 30 times the amount required in an inshore operation. Shortage of capital has delayed the modernization of boats and gear in the Atlantic provinces for many years but the situation improved after World War II with the growth of the fresh and frozen fish market and relatively favourable fish prices. Large filleting plants set aside capital for investment in modern craft to ensure themselves supplies of raw fish. Financial assistance by the federal and provincial governments also played an important part. A federal government subsidy of $165 a gross ton has been available since 1949 to fishermen and groups of fishermen for the construction of long-liners and draggers of approved sizes and types, and in all of the provinces provincial loan boards have assisted fishermen to finance new vessels, engines and other equipment.

Trawlers and small and medium draggers now supply close to 90% of the fish for the fresh and frozen industry. Much of the salted fish output still comes from fish landed by schooners and other smaller vessels.

Conservatism and political opposition to the modernization of fishing methods were also responsible for the slow development of the Atlantic industry, particularly during the depression of the '30's. The trawlers were said to be taking away the inshore fisherman's living, and to be damaging his gear and spoiling his fishing when operating in inshore waters.[2] Canadian draggers are prohibited

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[1] Although small-boat fishermen predominate by far in number, their output or contribution to the total catch is small in proportion. A high proportion of the total catch of groundfish of the Atlantic provinces is landed by the larger vessels: trawlers, draggers, and long-liners.

[2] See brief by Mr. C. J. Morrow, *Proceedings,* Vol. 22, p. 3565.

by regulation from fishing within 12 miles from shore, the inshore fisherman's preserve, although foreign draggers cannot be prevented from fishing up to the three-mile limit.

Low prices, lack of capital, self-interest, local opposition and business conservatism also explain in part the small size and wide dispersion of processing operations many of which were and still are carried on by fishermen. The growth of a mass market in North America for frozen groundfish fillets was accompanied by the improvement, consolidation and concentration of filleting and freezing operations. Freezing operations require a greater investment in plant and equipment and present greater technical management problems than the production of fresh fillets. Frozen fish plants tend, therefore, to be larger in size, more diverse in production and more specialized in management; there is also some horizontal expansion in the form of branch plants, and vertical integration of fishing, processing and marketing operations through divisions of the same company. There remain many small fresh filleting operations in areas such as western Nova Scotia and southern New Brunswick which are most favourably located with respect to the mass market of the United States Atlantic seaboard. There are also many small operators engaged in the production of bloaters from herring, saltbulk from cod, and other cured products, as well as fisherman-family enterprises salting and drying cod in regions remote from a fresh fish market.

Out of some 300 fish processing establishments in the Atlantic region in 1957, 58% produced less than $100 thousand worth each in the year and together accounted for less than 7% of the total value of production by the 300 establishments.[1] There are no adequate statistics on the number of fish processing operations employing less than 14 people each.

Marketing Structure

The conditions under which Atlantic fishermen along hundreds of miles of coastline sell their fish are so varied that no generalization can provide an adequate description of marketing arrangements. Prices may be influenced in greater or less degree by various factors such as seasonal supply, the strength of demand, or the dominance of one or more large processors in a region. A large and efficient plant may be able to establish leadership in the setting of prices effective over a large extent of coastline—an ability likely to be enhanced if the firm can ensure itself a considerable volume of supply by owning or controlling a fleet of fishing vessels. Competition by plants for fish tends to become competition for fishermen, with price only one of several considerations influencing the fisherman's sale; other considerations include the extension of credit for gear and supplies by the fish buyer and provision of bait. Inshore fishermen are unable to deliver far from home or fishing grounds but the larger vessels can change their base of operation. Consequently, the existence of only one buyer at a given location does not preclude a considerable degree of competition for the fishermen's catch.

[1] D.B.S. preliminary estimate.

In contrast with the auction system used on the Boston fish market, "season" prices for groundfish are in general use along the Canadian Atlantic Coast, varying from one region to another and from the summer season to the winter season. A premium of a cent a pound or more is commonly paid in the winter, where winter fishing is carried on, to ensure a greater volume of supply during the months of more difficult fishing. Furthermore, although the fish may be marketed in various fresh, frozen and cured forms, each with a specific market value, in general the same price is paid to fishermen for a particular species in a given locality regardless of the final utilization. Nevertheless, the cost of processing and the final market value do affect the regional price. For example, at a particular time in 1958, a landed price of two cents a pound was paid for cod at various Newfoundland filleting plants, compared with two-and-a-half cents in northern New Brunswick in the same season, three cents at Louisbourg, Nova Scotia, and three-and-a-quarter cents at Halifax and Lunenburg. Much of the cod catch in Newfoundland and the Gulf of St. Lawrence goes into salted fish production while a considerable proportion of Halifax and Lunenburg cod is marketed as fresh fillets at prices above those for frozen fillets.

The raw fish marketing procedure at the many private and public wharves and docks scattered throughout the Atlantic provinces varies considerably between areas and between species. Sales of the groundfish species are effected between the individual fisherman and a buyer. Although current prices at important fish landing points are collected by officers of the Department of Fisheries of Canada and are quoted over fishermen's broadcasts as well as appearing in local newspapers, sudden changes in these prices part way through a season are not uncommon. While there are a number of commonly accepted categories of fish for each species, which might be called grades and for which separate prices are established, these categories have no legal definition. The weight of each fish is the chief criterion, although the state or condition of the fish is also taken into account; indeed on occasion when storms or vessel breakdowns dog the track of the returning skipper, the catch of a whole trip may be dumped or be fit for fish meal use only. For cod, the categories are steak, market and scrod in descending order by weight, and a category unacceptable for food use called cull or shack fish. In a particular area the steak and market categories may be combined and, since there is no official basis for these categories in a grading system, the fisherman where he must deal with a single buyer either accepts the categories offered or takes his fish elsewhere; this involves extra travel with his boat. From time to time, variation in the weight ranges or the state or condition of the fish within a category may reflect changes in the competitive situation in bidding for the raw material.

There are many variations in the status of buyers. For the whole of the fisheries in the Atlantic region the number of persons engaged in buying fish is substantial. The Province of Nova Scotia requires fish buyers to be licensed and the numbers so recorded for that province run from 400 to 500. Many of these, of course, buy for particular companies; some buy and assemble independently and ship to processing plants by hired truck; others both buy and carry out their own transportation.

A number of filleting plants are branches of United States firms, and others have sales affiliations in the United States. Sales in Canada are made directly or through agents to wholesale houses and chain stores. However, Ocean Fisheries Limited owns and operates both wholesale and retail outlets in central Canadian urban centres including Montreal, Toronto, Ottawa, Brantford and St. Catharines. The ownership and control of the wholesale and retail outlets is of considerable significance because of the concentration of population in the region and the high proportion of total fish consumption it represents. Further, an unpublished study made by the federal Department of Fisheries a few years ago indicated that at the time of the study as much as 40% of urban fish consumption was accounted for by restaurant and institutional meals. Control of wholesale outlets on this account therefore takes on even greater significance.

The first co-operatives established in fishing areas in the Maritimes were lobster canneries. These production co-operatives gradually extended their activities to other branches of the fisheries and they developed into general fishery co-operatives. At one time the number of co-operatives was substantial but in more recent years consolidation and the decline in the inshore fishing has resulted in a drop in number to around 30 today. The central organization, the United Maritime Fishermen, was established in 1930 and it soon took over the marketing functions previously carried out on a regional basis by county associations. Fishermen members are given an advance at the time of delivery; the balance of returns, after deduction of operating expenses and a 1% deduction for a reserve or revolving fund, is distributed at the end of the year or marketing season. Rope, twine and other supplies are sold to members at prevailing market prices, but at the end of the accounting period any overcharge, after deduction of costs and reserves, is refunded on a patronage basis.

The fishermen's co-operative movement in Quebec was strengthened by formation of a central organization, the Quebec United Fishermen in 1939, with headquarters at Montreal. As an ancillary development, associated credit unions, their assets consisting mainly of shares and deposits owned by fishermen members, are particularly strong in Quebec. At one time the Prince Edward Island Fishermen's Central Co-operative Association Limited represented local co-operatives in that province but that organization is no longer in existence.

Lobsters

The lobster catch in the Atlantic provinces has been about 47 million pounds a year over the past 10 years; landings in 1958 were close to 43 million pounds—about the same as in 1949. The annual value of the catch to fishermen increased gradually from about $12 million to a peak of $18 million in 1956. It was nearly $16 million in 1958.

On the basis of export statistics and "official" conversion figures,[1] we estimate that somewhat more than one-half of the catch is marketed in the shell,

[1] Conversion figures for live to canned lobsters are subject to extreme variation. On the average, these would be about 160 pounds of live lobsters required to yield the standard case of 96 5-ounce tins of canned lobster; 435 pounds, live weight, to 100 pounds of lobster meat. As observed, the recovery rate for meat from live lobsters varies widely, being low, for instance, after the moulting period. Also catch statistics may understate the actual catch by a considerable margin because of the continuance of illegal fishing; considerable amounts of undersized and out-of-season lobsters may be canned without being recorded in landings statistics.

about one-third as fresh and frozen meat, and less than one-sixth as canned lobster. Apparently there has been little change over the past decade in the proportion sold alive or fresh boiled; exports in this category at more than 21 million pounds were about the same in 1956 and 1957 as in 1949 and 1950. Exports of fresh and frozen lobster meat, at about three million pounds in each of the past three years, were more than double the 1949-1950 figures, and exports of canned lobster, at one million pounds, were a little more than one-half of those in 1949 and 1950.

The computed live weight equivalent of all lobster exports during 1956, 1957 and 1958 was approximately 38.5 million pounds a year. This would leave about eight million pounds, live weight, for consumption in Canada, or half-a-pound per capita per annum.

Nova Scotia has accounted for nearly one-half of the total catch of lobsters at times but recently for about 40%. New Brunswick produces nine or ten million pounds a year, or about 20% of the total. Prince Edward Island's landings are usually eight or nine million pounds, Newfoundland's four or five million, and Quebec's two to three million.

The lobster fishery is intensive, taking perhaps two-thirds of the legal-sized stock each year. Closed seasons of varying times and lengths have been established in the different fishing districts more or less to coincide with the periods when moulting occurs (when the water is warmer and growth more rapid) and with the winter season where winter fishing is difficult or impossible. Peak landings occur in May and June, when the season is open for northern areas, with a considerable volume also in August and September. Bay of Fundy areas have a winter season, landings being concentrated mainly in December and January.

The fishermen fish from inboard-powered boats about 30 feet in length with homemade traps of lath and twine, weighted with flat stones and baited with salted herring or cod heads or any available bait, fastened 10 or more in sequence by rope leads to a long line buoyed and anchored at each end. The line is hauled daily if weather permits, frequently by use of a power take-off from the engine, and the traps emptied, re-baited, and dropped again over the side. Delivery of the lobsters is made to the cannery wharf or to the buyer or agent on the wharf. Throughout the Maritime provinces, there are a large number of buyers, including United States buyers. We observe later that there are wide seasonal and year-to-year variations in prices. In part this may be interpreted as a highly competitive market, particularly sensitive to short-run changes in the supply and demand situation; it is undoubtedly characteristic of the United States market which has a dominating influence.

In some areas, fishermen ship their lobsters through a pool or a co-operative, receiving payment, less handling and transportation costs, *pro rata* after the shipment has been marketed.

Grading at the wharf is a simple procedure; the fisherman uses a small rule to measure the lobster from the rear of either eye socket to the rear of the body shell to ensure that it is of the minimum legal size or larger. The maimed and smaller lobsters are sold to canners and processors, generally at lower prices than obtained for "market" size. Lobsters that are not to be

processed or shipped immediately are kept in "floats" of wooden crates each holding 110 to 120 pounds, moored on a line from the wharf and floating submerged in the water.

The live lobsters are shipped in the crates by truck or boat to market. Lobsters will live out of water indefinitely if kept cool, but fresh water is lethal to them, consequently they must be kept from direct contact with melting ice during shipment.

Because of the heavy investment required for freezers and frozen storage capacity, there are only three large frozen lobster processors and a few smaller operators in the Atlantic region, some making use of custom freezing and public cold storage facilities. There are a great many lobster canning plants; in 1956 there were 70. A lobster cannery does not represent a very large capital investment; the equipment is essentially a boiler, a can sealing machine and one or two retorts capable of maintaining the tinned meat at 240°F. for the required time. A great deal of meat is sold fresh (chilled, not frozen) and this similarly does not require expensive specialized machinery.

Dealers in live lobsters often operate a cannery to process maimed, weak or under-sized lobsters in conjunction with their business. Meat processors may find it advantageous to use liver, roe, and bits of meat from the legs and other edible parts to produce canned lobster paste and lobster tomalley. Local workers are used in the canneries—mainly women, whose manual dexterity is an asset in removing the boiled meat from the shell and packing it in tins. Much hand labour is required but the prevailing wage rates for women are low in many areas where the canneries are located and the labour cost is small in relation to the high value of the product.

The market price for live lobsters is subject to wide seasonal variations—low in summer when landings are high, and high in the winter season when few lobsters are being caught. The price to fishermen in one locality has varied from 30¢ a pound to 80¢ within one year. During the lobster marketing season, prices at the main buying points are published in local newspapers and reported daily over the radio. These prices are collected by fisheries officers and reported to the Canada Department of Fisheries regional office. Some dealers or processors lengthen the season by holding live lobsters in tanks through which sea-water is pumped. Conley's Lobster Limited at St. Andrews, New Brunswick, have a pound capable of holding a million pounds of live lobsters, sheltered on the inside of a bay at Deer Island; their main business is the year-round shipment of live lobsters. Pound operators must be licensed, of course, to ship lobsters during the closed season in their area.

Lobster canneries must have a permit to operate, issued after federal Department of Fisheries inspectors have certified that certain minimum standards are met in respect to equipment, operating methods and sanitation. A processor of fresh or frozen lobster meat must also comply with the sanitary requirements and the regulations of the *Meat and Canned Foods Act*. Standards for four grades of canned lobster, "Extra Fancy Quality", "Fancy", "Standard" and "Sub-Standard", are specified in the regulations and canned lobster is graded by the Department of Fisheries inspection laboratory.

Canned lobster is packed in three sizes of cans, containing respectively, two-and-a-half, five, and ten ounces *drained weight* of lobster meat. The standard case is one of 96 5-ounce tins, or the equivalent. The amount of cooked meat put into the 5-ounce tin before sealing is six-and-one-eighth ounces; i.e., 36¾ pounds of cooked meat are required per case. Much of the fresh and frozen meat is packaged in the 10-ounce tin but larger and smaller packs are also produced. In freezing cooked lobster meat, the weight loss is about 3%.

No representative raw material cost can be determined for lobster meat and canned lobster for a number of reasons. The recovery rate of meat from live lobsters may vary between 20% and 30%. The wide seasonal difference in prices means a high cost for canned lobsters in regions dependent upon the winter fishery. At times, fresh, frozen or canned meat is processed from market-size lobsters, or the price paid for "canners" is as high as that for "market" lobsters. In some districts nearly all of the lobsters landed may be market-size because the minimum legal size is three or three-and-three-sixteenths inches.

We have, however, used Montreal wholesale and retail prices and reported prices from Souris, Prince Edward Island, to compute sample price spreads at various times, using an arbitrary recovery rate of 23% in converting live lobsters to boiled meat, or 160 pounds, live weight, to the standard case of canned lobster. The quoted prices being those for "market" size, it was arbitrarily assumed that the landed price for "canners" was three-quarters that for "market" lobsters. The data, as indicated in Table 68, show that the Souris fishermen's share of the retail dollar spent for canned lobster in Montreal was slightly more than 40%. The retailers' margin was from 8% to 16%.

Cod Fillets

The production of cod fillets and blocks in the Atlantic provinces has been in excess of 70 million pounds a year for the past three years, representing almost one-half of the total fillet production. Five-sixths of the cod fillets were frozen. The annual volume of production increased gradually from 35 million pounds in 1949 to 72 million in 1957, an increase of more than 100%. In the same period, the Canadian Atlantic production of fillets and blocks from all groundfish species increased by 125% from 65 million pounds in 1949 to 147 million in 1957; cod lost ground to haddock, redfish and flatfish.

About one-third of Atlantic cod landings is currently being processed into fresh and frozen fillets and blocks, the conversion rate for cod into fillets being about one-third and total cod landings having been recently in excess of 625 million pounds. Some cod is shipped in the headless dressed form for conversion into steaks, and the balance is cured—some lightly smoked or turned into boneless salted cod for the North American market but most salted and dried for export to traditional markets in the Caribbean, South America and southern Europe.

Newfoundland fishermen are especially dependent upon cod; it has comprised 60% to 65% of the value of their landings in recent years. Their cod landings make up approximately two-thirds of total cod landings for the Atlantic region, and the Newfoundland cod fillet production, almost all frozen, is usually

Table 68—Summary of Fisherman-Retail Spread, Canned Lobster, Selected Years, 1949 to 1958[a]

Year	August 1 Retail Price at Montreal	Mid-July Wholesale Price at Montreal	June Landed Price for Live Lobsters at Souris P.E.I.	Raw Material Cost[b]	Retailers' Share of Value	Fishermen's Share of Retail Value
	(¢/5-oz. tin)	(¢/5-oz. tin)	(¢/lb.)	(¢/5-oz. tin)	(%)	(%)
1949	70.6	65.1	24	30	8	42.5
1956	88.1	74.0	30	37	16	42.0
1958	96.6	81.5	33	41	16	42.4

[a] Adapted from price spread study of canned lobster in Volume III where a fuller explanation of procedure, etc. is given.

[b] We have adjusted the fishermen's price to obtain the raw material cost equivalent to a 5-oz. tin at retail. Before making the adjustment we have taken the price for live lobsters as three-quarters of the price quoted in order to take account of the lower price paid for "canners" than for "market" lobsters.

more than one-half of the total. Much of the cod goes into dried salted production or into saltbulk for drying in plants in Newfoundland or on the mainland in Nova Scotia.

The domestic disappearance of fresh and frozen cod fillets[1] currently amounts to less than one pound per head of population per year. The total figure has been decreasing somewhat, from 16 million pounds in 1950 to less than 12 million in 1957, the latter figure being about one-sixth of the Canadian production. In contrast the Canadian production of fish sticks, begun in 1954 and using frozen blocks mainly of cod and haddock, had grown to nearly six million pounds by 1957. This represented a displacement of ordinary fillets and other varieties rather than an increase in the consumption of fish. The Canadian production of fish sticks was for domestic consumption because of prohibitive customs duties on exports to the United States; the raw material, frozen blocks and slabs, would be included in the domestic disappearance figures for frozen fillets and blocks.

A witness at the Halifax hearings referred to the sale in Canadian chain stores of fish sticks that were apparently packed in the United States.[2] A number of Canadian plants pack fillets and other products in labels supplied by their United States owners, affiliates or customers. Such packs are imprinted "Product of Canada"—sometimes in small letters. The Canadian customs duty of 22½% ad valorem on fish sticks from the United States is a strong deterrent to their entry. In consequence, fish sticks bearing labels of United States firms that are found in Canadian stores are likely to be a Canadian-made product.[3]

[1] Annual production minus exports, with allowance for changes in stocks.

[2] *Proceedings,* Vol. 13, pp. 2096-2100.

[3] Canadian breaded fish sticks, cooked or uncooked (containing added oil from the cooking or breading), are subject to a customs duty of 30% ad valorem upon entry into the United States. Groundfish fillets and blocks enter the United States under a customs duty rate of two-and-a-half cents a pound, except for an annual quota from all sources which is admitted at one-and-seven-eighths cents a pound. The quota is set at 15% of the average aggregate apparent annual consumption of such fish in the United States during the three calendar years preceding the year in which the imported fish are entered. The 1958 quota was 35,892,221 pounds; the 1959 quota is 36,919,874 pounds.

Cod are caught by small and large craft with line gear or dragnets. They are gutted before being stowed in ice below decks, and are culled or graded on the plant wharf as they are being unloaded and weighed in. The size categories, as we said previously, vary according to local practice, but the intermediate grade, "market" cod, is usually from about four to ten or twelve pounds weight. Steak cod in the larger sizes are not well suited for filleting and in many places are split for salting and drying if not sold fresh or frozen dressed.

The inshore fisherman typically lands his fish at the plant wharf the day it is caught. Quality would be improved if he carried ice in which to pack his catch, but this is seldom done; ordinarily, the price received would be the same whether he used ice or not.

While no grades are officially established for the raw fish materials the Department of Fisheries of Canada has recently instituted a voluntary program of inspection and quality grading of fish on the wharf and in the plant. Frozen products meeting clearly defined quality, processing and packaging specifications may be marked with a "Canada Inspected" label on the wrapper or container. Inspected fish to be marketed fresh as whole fish, fillets or steaks may be identified by having the words "Processed Under Government Supervision" marked on the wrappers, labels or containers.

The raw material cost in filleting cod is determined by the price paid by the plant for raw fish and, to a limited extent, by the efficiency of the filleters and skinners in getting the maximum yield of fillets. The yield may be as high as 38% or 39% from large fish, but the estimate in general use is 33% for fillets and 1% or 2% less for blocks, which involve a little additional waste in ensuring that the pin bones are removed from the nape of the fillet. Thus, for raw fish prices of two cents to three cents, raw material costs would be from six to nine cents per fillet-pound. Small-sized cod ("scrod") bring the fisherman a cent or one-and-a-half cents less than the larger "market" cod but the recovery rate is somewhat lower in filleting small fish. Nevertheless, the raw material cost is reduced to some extent by the use of scrod in filleting.

The filleting line includes filleters and skinners, who are usually men, and candler-inspectors and weigher-packagers, who are usually women. The use of mechanical skinning machines and, lately, of filleting machines in the filleting plants has increased during the past 10 years and, at least in some plants, improved equipment, greater mechanization of operations and the growth of worker and management skills have increased the value of output per worker. In this respect plants have been very unequal in their progress. Wage rates in the region have apparently increased by about 40% since 1949. In some plants the effect of this on costs apparently has been completely offset; in others, costs have been too high or selling prices too low and they have been closed down or taken over by new management.

The waste in filleting, representing two-thirds of the landed weight of cod, or two pounds of waste per pound of fillets, is used for the production of fish meal for poultry and animal feed, the yield being one ton of meal from about five tons of offal. The rate paid by fish meal plants for waste fish and offal varies

widely but might average $8.00 to $10.00 a ton. This would amount to three-quarters of a cent or more per fillet-pound for the two pounds of waste in filleting—a reduction in the raw material cost to the processor.

An informed estimate suggests a labour cost of filleting cod at four to five cents per fillet-pound and the overhead costs at a like amount. These, in conjunction with a raw material cost of eight or nine cents, would yield an f.o.b. plant cost of 17 to 19 cents a pound. It may be that other species filleted have had to bear more than their proportionate share of overhead costs because cod fillet prices have been under relatively heavy pressure on United States markets from foreign supplies and from consumer preference for haddock and other filleted species.

We have computed approximate annual raw material cost figures from the seasonal prices paid for cod at Halifax and annual retail and wholesale prices of Atlantic cod fillets at Toronto from the monthly price quotations published by the Dominion Bureau of Statistics—frozen cod fillets for the period 1952 to 1958 and fresh cod fillets for 1955 to 1958. The results appear in Table 69. The retail price of fresh cod fillets was 50% or more above that of frozen cod fillets, and the retailers' markup on fresh fillets about 35% compared with 20% on frozen. The fisherman received the same price for his cod whether it went into fresh or into frozen fillets. Consequently, his share of the retail value of fresh cod fillets (about 20%) was smaller than his share of the value of frozen fillets.

Haddock Fillets

Haddock are of smaller average size than cod but the flesh is similar. Most of the catch is taken with drag-nets and the existing stocks, in contrast with cod, are so intensively fished that no general increase in the catch is likely in the future. Haddock landings in the Atlantic provinces first increased and then decreased, in total, during the past decade; the average has been about 128 million pounds a year for the last five years. The Canadian east coast production of fresh and frozen haddock fillets and blocks has averaged more than 40 million pounds a year recently (80% frozen), of which about two-thirds was exported, leaving close to 14 million pounds a year for domestic consumption—less than a pound per capita per year (edible weight). Nearly all haddock is filleted, but eight or nine million pounds a year, landed weight, is sold as fresh and frozen dressed, and smoked haddock (the true "finnan haddie") might take a little more than a million pounds.

The value of haddock landings to Atlantic fishermen is between four and five million dollars a year. Prices range from two-and-a-half to three cents a pound in Newfoundland and from five to six-and-a-half cents at Halifax, prices being often a half-cent or a cent higher in winter months. Haddock are sorted in two categories according to size at the time of sale by the fishermen. The categories or grades are designated "large" and "scrod" haddock, the latter bringing one-and-a-half to two-and-a-half cents less than the large in the market. As with other groundfish these buying categories are traditional and not official grades.

Table 69—Summary of Fisherman-Retail Spread, Fresh and Frozen Cod Fillets, 1952 to 1958[a]

Year	Average Retail Price at Toronto	Retail Equivalent Value per lb. of Market Cod Landed Weight	Toronto Wholesale Price of Frozen Cello 5's	Average Landed Price of Market Cod at Halifax less Value of Offal	Fishermen -Retail Spread	Retailer's Share of Retail Value	Fishermen's Share of Retail Value
	(¢/lb.)	(¢)	(¢/lb.)	(¢)	(¢)	(%)	(%)
			A. Frozen Packaged Cod Fillets, 1952-58				
1952	38.6	12.9	27.8	3.5	9.4	21	27
1953	34.8	11.6	25.2	3.0	8.6	22	26
1954	33.5	11.2	25.6	3.2	8.0	24	30
1955	30.8	10.3	24.4	3.0	7.3	21	29
1956	29.8	9.9	24.8	3.2	6.7	17	32
1957	30.2	10.1	24.9	3.0	7.1	18	30
1958	31.4	10.5	27.9	3.0	7.5	11	29
			B. Fresh Unwrapped Cod Fillets, 1955-58				
1955	44.8	14.9	28.2	3.0	11.9	37	20
1956	44.9	15.0	29.2	3.2	11.8	35	21
1957	45.5	15.2	30.3	3.0	12.2	33	20
1958	51.4	17.1	33.4	3.0	14.1	35	18

[a] Adapted from price spread study of cod fillets in Volume III where a fuller explanation of procedure, etc. is given.

Much of the small haddock, sometimes landed and filleted "in the round", goes through filleting machines and into frozen blocks or slabs for the production of fish sticks. Filleting is carried out with the same equipment and personnel used in filleting the other groundfish species. The recovery rate is one or two percentage points higher than that for cod, except when a great deal of scrod is being processed. When the skin is left on haddock fillets the yield is in excess of 40%.

The labour cost of filleting haddock is slightly higher than that for cod—perhaps by half-a-cent per fillet-pound. The raw material cost at a landed price of five-and-a-half cents, assuming a recovery rate of 36%, would be about 15¾ cents per fillet-pound, or 15 cents after allowance for the value of nearly two pounds of offal (at $7.50 per ton) used in fishmeal production. Addition of processing costs of, say, nine cents would bring costs f.o.b. plant to about 24¢ per fillet-pound. This figure could not be claimed to be representative because of the wide variety of plant costs and of regional and seasonal landed prices for haddock. We have computed samples of price spreads on fresh haddock fillets, using an average figure for the annual price to fishermen at Halifax and approximate annual wholesale and retail prices at Toronto. These are shown in Table 70.

3. The Fresh-Water Fisheries

Principal Species and Products

The areas in Canada providing commercial supplies of freshwater fish species are the Great Lakes (Ontario), a large number of lakes in Manitoba, Saskatchewan and Alberta, and Great Slave Lake in the Northwest Territories. More

than a dozen species are caught, with a landed value in total of $12 million to $14 million a year; the most important species are, in order of total landed value, whitefish, yellow pickerel, blue pickerel and lake trout. Perhaps 90% of the catch of these species is sold in the United States, mainly in the fresh or frozen dressed forms although there is a growing production of fillets. The amount of fresh-water fish marketed in Canada is small and the quality is frequently poor.

Table 70—Summary of Fisherman-Retail Spread Fresh Unwrapped Haddock Fillets, 1950 to 1958[a]

Year	Average Retail Price Fresh Fillets at Toronto	Retail Equivalent Value of Fillets per lb. of Haddock Landed Weight	Toronto Wholesale Value of Fillets per lb. Landed Weight	Raw Material Cost of Fillets per lb. of Haddock Landed Weight	Fishermen -Retail Spread	Retailers' Share of Retail Value	Fishermen's Share of Retail Value
	(¢/lb.)	(¢)	(¢)	(¢)	(¢)	(%)	(%)
1950	49.3	17.3	12.3	6.0	11.3	29	35
1951	55.6	19.5	14.2	5.5	14.0	27	28
1952	60.6	21.2	14.6	5.5	15.7	31	26
1953	58.8	20.6	13.7	4.8	15.8	34	23
1954	59.1	20.7	13.9	4.8	15.9	33	23
1955	57.9	20.3	12.9	4.3	16.0	36	21
1956	59.7	20.9	13.6	5.0	15.9	35	24
1957	61.1	21.4	13.9	4.8	16.6	35	22
1958	67.8	23.7	15.6	5.3	18.4	34	22

[a] Adapted from price spread study of haddock fillets in Volume III where a fuller explanation of procedure, etc. is given.

Conditions of Production

Fresh-water fishing methods and conditions vary widely. Little fishing can be carried out on the Great Lakes in the winter season but, where the lakes freeze over on the prairies and in the Northwest Territories, a winter fishery is carried out on the ice distinctly different from the summer fishing from boats. Some men may engage in one fishery but not the other and many are part-time farmers or trappers. Typically the capital investment in fishing equipment per man is low, and much of this is supplied by the fish buyer or packer at the lake who receives the fish and dresses and packs it in ice in shipping boxes for the journey to market.

The gear in general use is the gill-net, set from boats in the summer or through holes in the ice in winter. The fishing boats on the Great Lakes are mainly closed-in-steel-hulled "fishing tugs" 50 to 70 feet long, although many motor launches and sail boats or rowboats are also used. On the prairie lakes motor-driven boats or rowboats are also used, usually about 32 feet long, as well as 20-foot skiffs. On Great Slave Lake the trend has been towards larger boats 35 to 45 feet long with a deckhouse to shelter the crew, capable of carrying up to five tons of fish.

The winter fishery is carried on with horse or tractor-drawn sleighs or cabooses, motor trucks, and tracked snowmobiles called "bombardiers". Aircraft are used for transportation from some of the more remote lakes, or in

winter a tractor train of sleighs with a heated caboose for the crew may haul the catch 60 or 70 miles to the railway over routes that would be impassable in summer.

The amount of processing of products is limited chiefly to packing by small operators at the lakes and freezing by dealer-processors in the larger centres such as Winnipeg. These may also do some curing or filleting. Filleting operations are carried out at some lakes, one of the advantages being the reduction in transportation costs achieved by discarding the waste before shipment.

The handling of the winter catch depends upon whether it is to be sold fresh or frozen. Fish for the frozen trade may be dressed immediately and allowed to freeze on the ice. For better quality, however, it needs to be quick-frozen after rapid transit to a modern plant. Fish for the fresh market is loaded into a heated caboose or snowmobile, frequently being dressed after it arrives at the base camp. From there it is shipped out by truck or railway, or it may be flown out to railhead if no road is available.

Because the prairie lakes are scattered and distant from market the cost of transportation and the maintenance of quality are serious problems. The volume of production from many lakes is too small for economical handling or processing.

Fish production from some lakes has declined or ceased because of the depletion of the stocks, infestation by parasites or other reasons. The depredations of the sea lamprey have seriously reduced the catch of lake trout and whitefish from the Great Lakes. The provincial governments have jurisdiction over the fresh-water fisheries and they have been involved, along with federal government agencies, in conservation programs which culminated in the joint Canada-United States Great Lakes Fishery Convention establishing a commission to study problems and administer the various conservation projects. Representatives of the provincial and state governments concerned and of the two federal governments are members of the commission.

Marketing Structure

Regional marketing patterns differ considerably. Fishermen may sell direct to consumers or to pedlars who do so, but the larger part of the catch is sold to dealers or processors who may also be wholesalers and exporters. Much of the winter production of frozen fish from the prairie lakes is bought by traders who put the fish into cold storage and sell it as the demand arises. In the Niagara peninsula fishermen's co-operatives pack or process the fish for sale to exporters or wholesalers, and processors or wholesalers buy from the fishermen. Fishing companies on Great Slave Lake supply the fishermen and buy the fish to ship it by truck after processing to railhead near the Peace River and thence by refrigerated car to Chicago or New York. Sales are made through brokers or commission agents in the principal markets; also the dealers or fishing companies may themselves act as wholesalers or sell direct to United States importers.

The market demand for fresh-water fish is strongly influenced by the Catholic and Jewish religious holidays. The predominant demand for whole and fresh fish rather than filleted or frozen fish is also a result of Jewish preference. Irregular supply also plays a part in causing sudden price variations, particularly in

the fresh fish market. The substantial measure of control over supply, including importations, by two or three large United States firms may also be a factor affecting prices.

In Saskatchewan about one-half of the commercial fish production is handled by the Saskatchewan Fish Marketing Service. Fishermen are encouraged to form co-operatives but the Service will operate on any lake or in any fishing area at the request of a majority of the fishermen. The products marketed are fresh and frozen dressed and filleted fish, principally whitefish and lake trout. The Service operates plants, warehouses and other facilities provided by the Department of Natural Resources or by fishermen's co-operatives, as well as its own, returning all proceeds to the fishermen after deduction of processing and marketing costs.

In order to provide greater price stability to the primary producer the Government of Saskatchewan has instituted a guaranteed initial price for each species set for each lake or fishing area in accordance with the production and marketing costs of the area. The policy is administered by the Department of Natural Resources with the Fish Marketing Service acting as its agent. A further feature of the Saskatchewan system of fish marketing is the government's collection of a levy on sales of fish outside the province. This levy is regarded in part as a return to the government and the public for the use of a common property resource.

Whitefish Fillets and Dressed Whitefish

Whitefish are found in most of the lakes of the inland region, from Ontario to the Yukon. Data on annual Canadian landings are not very accurate but the volume is around 25 million pounds a year, about one-fifth by weight and nearly one-third by value of all fresh-water fish landings.

Whitefish exports for the 10 years 1949 to 1958 averaged 17.4 million pounds a year of fresh or frozen, whole or dressed fish, and one million pounds of fresh or frozen filleted whitefish. These figures combined, using conversion rates,[1] represent an annual average export equivalent to about 23 million pounds landed weight. This is more than 90% of total average whitefish landings. Domestic disappearance thus appears to be about two million pounds a year.

By arrangement with provincial authorities all whitefish shipments destined for export are required to be inspected by federal Department of Fisheries officers. Shipments to Canadian markets will be inspected if a request is made, but there is nothing to prevent consignments rejected as unfit for export from being diverted to Canadian destinations for sale to Canadian consumers.

The season of marketing in conjunction with the seasonality of demand affects the price greatly. The average price received for whitefish by Great Slave Lake fishermen is much higher in winter than in summer, for example; the summer fishery there has to sell fresh white-fish in competition with heavy production from the Great Lakes and prairie sources, but in winter Great Lakes landings are small and the Great Slave industry is better organized to ship out fresh fillets in winter than are most of the prairie producers.

[1] Whitefish are sold mainly dressed with the head on. Recovery rates vary, but 15% may be lost in gutting, and 45 to 50 pounds (or more) of fillets are obtained from 100 pounds of whitefish in the round.

Lake Erie fishermen receive higher average prices for whitefish than other Ontario producers, perhaps because of their proximity to the larger Canadian and United States markets and the consequent high proportion of the catch sold fresh rather than frozen. The prices usually reflect also an established market preference for fish from certain lakes. Whitefish from some of the prairie lakes have flesh of a darker hue, and the market prices received are lower in consequence.

Owing to the market preference for dressed fish, the market price for whitefish fillets does not usually reflect the difference in edible weight nor the additional cost of filleting, which may amount to 10 or 12¢ per fillet-pound. Consequently, it is uneconomic to fillet fish that can be sold as first quality fresh dressed whitefish. Most whitefish fillets are frozen and most are cut from low-priced raw fish or cut at the source of supply where the consequent saving in transportation costs may be considerable. Frozen fillet production now represents about one-eighth of total whitefish landings.

The monthly wholesale-retail price spread on fresh dressed whitefish in Toronto between 1950 and 1958 (computed from the official quotations) has ranged between 25% and 55% of the retail price. The average spread for the year 1958 was close to 25 cents a pound or 42% of the retail price average of 58.7¢. At the end of January, 1959, Toronto wholesale price quotations for fresh dressed whitefish ranged from 60 to 90¢ a pound for Great Lakes whitefish and from 15 to 25¢ for the same from the western provinces. The Toronto retail price for fresh dressed western whitefish was 43 to 45¢, indicating a spread of 20 to 30¢ a pound or a markup of from 45% to 67% of the retail price. These markup figures in part reflect the high risk of spoilage in handling fresh fish; the highest markups were registered during the summer months.

The Toronto average retail price of 58.7¢ may be compared with retail prices for fresh dressed whitefish in Winnipeg ranging between 25 and 59¢ a pound during 1958, the average being about 33¢ in the last four months of the year and probably somewhat higher in the spring. Refrigerated express rates from Winnipeg to Toronto would represent a transportation cost of from four-and-a-half to six-and-a-half cents a pound, according to the size of the shipment.

The average value of whitefish to the fishermen from all Manitoba lakes during the 1957-58 season was 13¢ a pound, but the prices at different lakes varied widely. Thus, at Island Lake fishermen received four-and-a-half cents (for whitefish to be filleted), on Lake Winnipeg they received 25¢ in the summer and 20¢ in the fall, on Lake Winnipegosis in the summer, 10¢, and at Moose Lake, 12¢. The Moose Lake price, for instance, represented about 36% of a late-1958 Winnipeg retail value of 33¢ for fresh dressed whitefish or, assuming that Moose Lake whitefish was shipped to Toronto, about 20% of the Toronto average retail price. Assuming the average retail price of western whitefish to have been near to 45¢ a pound in Toronto, the Moose Lake fisherman received about 27% of the Toronto retail value of his product.

ALL OF WHICH WE RESPECTFULLY SUBMIT FOR YOUR EXCELLENCY'S CONSIDERATION

Chairman

Secretary

September 11, 1959.